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AUTHOR Lum, Glen
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ABSTRACT

In November 1993, Harrisburg Area Community College, in Pennsylvania, sent questionnaires to 1,138 graduates from the 1992-93 academic year seeking information about their employment or educational status and their perceptions of the extent to which their educational objectives were achieved. Responses were received from 885 graduates, for a response rate of 77.8%. An analysis of survey responses indicated the following: (1) 61.5% were female, closely matching their percentage in the general student population; (2) although minority students comprised 9.5% of the student body, they represented only 5.3% of the graduate population; (3) 27.8% were graduates of business, while 22.7% were from social sciences; (4) 36.9% had indicated an educational goal of preparing for a new career and 37.3% had indicated a desire to prepare for transfer to a senior institution, while 66% of all graduates indicated that they had fully accomplished their goal; (5) academic programs were rated as excellent by 35.7% and as good by another 57.2%, while nursing program graduates were the most critical of their major; (6) 62.7% were employed full-time and another 20.5% were employed part-time, while almost 60% indicated that their job was either directly or somewhat related to their field of study; and (7) 37.2% were continuing their education. Appendixes include the survey instruments and cover letter, tabled results, and list of job titles and employers of working graduates. (KP)

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TITLE: 1993 SIX MONTH GRADUATE FOLLOW-UP SURVEY

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1993 SIX MONTH GRADUATE FOLLOW-UP SURVEY

GLEN LUM
JULY 1994

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1993 SIX MONTH GRADUATE FOLLOW-UP SURVEY

I. Introduction

Completion of the Six Month Graduate Follow-Up survey for the Class of 1993 enhances Harrisburg Area Community College's (HACC) understanding of the post graduation activities of its students. Additionally, the information gained by the survey is used to meet the Pennsylvania Department of Education's (PDE) reporting mandate as well as providing data for the in-house assessment of each academic program. Compliance and activities related to the latter has become more important in recent years as pressure from various governmental departments, external accrediting agencies, and internal demands and regulations have highlighted the value of and need for a coherent evaluation policy that addresses both the issue of accountability and congruence.

For the seventh consecutive year the same questionnaire was employed. Not only has this provided continuity in terms of assessing like programs and post-graduation activities from class to class but trends and changes can also be monitored. This proved to be especially valuable in terms of the proportion of graduates who obtain employment shortly after program completion versus those who transferred directly into a senior college or university.

A major component was added to the survey of the 1993 class. The Pennsylvania Commission for Community Colleges requested additional data related to students' educational goals and whether or not they were achieved. The questions were included on a separate sheet as an addendum and appended to each student file.

The report itself is divided into four major sections. This includes a review of the demographics and educational goals, graduates assessment of their academic program, an examination of employment related issues, plus tracking the transfer status of this class to senior institutions. Preceding these sections, the methodology utilized in the survey process plus the statistical analyses applied to the data will be discussed. Again, it is the primary intent of this study to fulfill PDE mandated reporting while also providing HACC with an on-going longitudinal data base from which comprehensive assessments of graduates can be conducted.

II. Methodology

The questionnaire was initially drafted by the Research Office to comply with the data reporting requirements of PDE. The final document was approved by Academic Council and it was first employed in 1987. Beginning with the Class of 1988, the SPSS statistical package and dBase III were utilized to complete the analysis. Since 1988, several upgrades of both software programs

have been completed (currently using d Base III Plus and 5.0.1 version of SPSS) while no changes have been made to the survey itself. For the Class of 1994, the responses to the income question (#8) has been revised to reflect the effects of inflation. This was not done for this particular class. A copy of the questionnaire can be found in Appendix A.

The addendum to this survey was HACC's response to the Commission for Community College's request for information not found in the original questionnaire. Questions generally focused on determining each graduate's educational goal and whether the goal was achieved. The addendum provided valuable information not heretofore available though it is not known at this time whether this expanded format will be employed in the future. Appendix B lists the questions found in the addendum.

Adhering to past practice, a number of demographic and HACC achievement variables have been appended to each graduate file. They include gender, age, ethnic/race, HACC major, GPA, and total credits earned, whether financial aid was received, transfer institution and total transfer credits. These factors provide the basis of determining group differences for many of the bivariate and multivariate analyses.

A total of 1,138 students were mailed a survey the third week of November, 1993. The initial return after a three week period came to 384 (33.7%) and a second mailing was then concluded in mid December. Included in the follow-up posting was a letter from the Research Office informing the graduates why the survey was sent and encouraging them to return the instrument. By the first week of January, 1994, 514 surveys had been returned (45.2%) and this figure was increased to 885 (77.8%) after follow-up telephoning and selected remailing was concluded through February, 1994. Since the creation of the data file and the completion of the statistical analysis, five more surveys were returned but the results from the late returners were not included in this report. The follow-up letter can be found in Appendix C. Also, a complete "Survey Return Rate by Academic Major" is located in Appendix D.

Descriptive analysis of each question and the demographics will be the first step taken when reviewing the data. Pertinent information is frequently drawn from the least sophisticated of the statistical runs and it is important to recognize that simple frequency counts often results in the most significant findings. Appendices E and F lists the demographics and survey results respectively (addendum included).

Primarily relying on the results of descriptive analyses, both bivariate and multivariate statistics will be concluded. Chi square statistics will be used in the bivariate portion as a means to determine group differences with the contingency coefficient (CC) finding employed to measure that strength of the relationship. Next, the multivariate analysis will be used to ascertain which independent variables (IV) remained important in explaining the differences in the dependent variable (DV). Both statistics from the analysis of variance (ANOVA) and multiple classification analysis (MCA) are considered with the selection of the IVs based primarily on the bivariate results and the pairing of variables in past reports.

Finally, it should be noted that not every bivariate nor multivariate result will be reviewed. Rather, those having special relevance to the question under discussion plus findings which differ from past trends were selected. Where possible, comparisons between the Class of 1993 and their peers from previous classes will be made. A discussion of the demographics follows.

III. Demographics and HACC Achievement

A. Descriptive

Females again constituted more than six out of every ten graduates (N=544 or 61.5%), a figure closely paralleled to their college-wide representation. This figure has not changed greatly over the last seven years (in terms of percentages) and this certainly suggests that the higher participation rate by women in higher education had little or no adverse effect on their graduation rate. Simply stated, more females matriculate to HACC and more complete their program.

Another consistent result found over the past seven years was the underrepresentation of minorities in every grading class. Though minority students constituted nearly one out of every ten HACC students in the Fall of 1993 (9.5%) they made up only one in twenty (N=47 or 5.3%) of the Class of 1993. This has been a long-term challenge for community colleges in general and HACC in particular. While the proportional representation of minorities in the Class of 1993 has not significantly improved, the absolute number of minority students grew from 45 in 1987 to 62, an increase of 37.8%. This should not be lost since actual progress has been made to increase the number of minorities graduating from HACC.

The mean age of this group was 29.2 years, a decline from 30.3 years for the Class of 1992. Additionally, the median age was 31 years indicating that half of the graduates were non-traditional adults. The two largest groups in terms of age were those in the 20-22 years old range (N=295 or

33.3%) and graduates 30–39 years old (N=198 or 22.4%). Historically, these two groups have been the most dominant in terms of size explained in part because the 20–22 year old group reflects the traditional FT student who matriculated to HACC just out of high school and the 30–39 group were those who likely sought to either enter the job market with better skills, train for a new career, or further their career by enrolling on a PT, evening basis. Upon closer examination, nearly two out of five respondents (N=342 or 38.6%) were students 30 years or older. Without question, HACC was the institution of choice for many, especially the non–traditional adults who had far less flexibility in terms of institutional choice, time, and perhaps even selection of degree program and/or career.

The Business Division remained the most popular (N=246 or 27.8%) followed by Social Science (SSPSBE; N=200 or 22.7%) and then Science, Nursing, Allied Health, and Physical Education (SNAHPE; N=179 or 20.2%). This order has changed little over the years but the Business Division has shown a decline in the percentage of those who graduate from their programs compared to previous classes whereas SSPSBE and SNAHPE have seen their proportional share increasing. However, the most dramatic change over the past few years could be found in the numbers earning a diploma, a segment of the class which included one out of every ten graduates (N=117 or 10.3%). Without question, these specialized, less than one year programs of study have proved to be very popular. Later, further analysis will reveal how diploma graduates may differ from their peers earning AA degrees and certificates.

Another measure which has not changed greatly over the years is the mean GPA for the entire graduating class. The figure for the Class of 1993 was 3.05, identical to the 1992 average. Similar to the previous year, over half of all respondents earned a GPA of 3.00 or higher (N=467 or 52.7%). Clearly, HACC graduates have established an outstanding academic record and the Class of 1993 proved to be no exception.

The average number of credits earned at HACC was 58.9, a drop from the 60.5 level found with the 1992 group. Perhaps the most important factor for this change was the increased number of graduates earning a diploma. All of these programs required fewer than 30 credit hours and with the large influx of students over the past year or so, this would have depressed the overall mean figure for the Class of 1993. How the diploma factor will affect future classes and the HACC credits earned variable remains to be seen.

Nearly a third of the respondents (N=276 or 31.2%) received some form of financial aid. This was much higher than the 23.6% from the Class of 1992 and the 20-25% range historically associated with other graduates. Without additional information it is not possible to determine exactly why there was such a significant rise in the number of aid recipients. However, a cogent argument can be made regarding the rising financial needs of many students as tuition and fees increase at the same time personal resources are stretched to the limit. Certainly, the more than doubling of financial aid applicants over the past five years strongly suggest that more people are finding it difficult or impossible to continue their education without outside assistance.

No major differences were discerned concerning the number of graduates who transfer credits to HACC. Again, nearly four out of ten (N=357 or 40.3%) transferred at least one credit to HACC while the mean figure computed to 21.6 credits for those who transferred from other institutions. The most popular schools which HACC graduates transferred <u>from</u> remained Penn State (all campuses), Millersville and Shippensburg Universities. With the establishment of the Lancaster Campus, Millersville University has played a far greater role in the life of the college both as a sender and receiver of HACC students.

B. Bivariate

This portion of the report will initially match the selected demographics and HACC based variables to each other. As before, reference will be made to past studies comparing current findings to those of previous classes.

The first set of analysis matched gender to ethnic/race, age, academic major, HACC GPA, HACC credits earned and the financial aid variable. No significant differences were uncovered when sex was paired with the demographics and HACC based variable except academic major. This has been the case since the Six Month Follow-Up was standardized and the advent of the diploma programs only heightened the demarcation between males and females.

The findings themselves indicated a very strong preference among females to select an academic major from the SNAHPE Division and to a lesser extent from C&A and SSPSBE. Females were also proportionally overrepresented in business programs but only slightly (Significance = .000; Contingency Coefficient = .44). Males on the other hand were vastly overrepresented in the MET Division and diploma programs.

Of course, the dominance of females in SNAHPE can be directly attributed to the very popular nursing (RN especially) and other allied health programs. This adhered to historical patterns as did the gravitation of males toward the technical/engineering majors (e.g. electronics and mechanical) in MET. However, the greater tendency of females to select programs in the SSPSBE Division compared to past surveys was likely the result of several programs. Chief among them were the pre–teaching K–6, early childhood, and the legal assistant majors which were overwhelmingly subscribed to by females. Conversely, the diploma programs, especially auctioneering, were very popular with males.

The matching of the ethnic/race to the other variables produced a number of intriguing finds. Minority graduates were more likely to be 30 years or older versus the traditional college–age status of their white counterparts (25 years or less; Signif. = .029; CC = .21). In assessing program choice, Asians favored the ones offered in MET, African Americans opted for majors in SSPSBE and the diploma curricula, while the majority group was overrepresented in the SNAHPE and Business Divisions (Signif. = .004; CC = .24). In addition, <u>all</u> minority groups were more dependent on financial aid (Signif. = .018; CC = .20).

None of these points was particularly new or even eventful, especially since similar differences were uncovered in the past. Perhaps the most important aspect related to the minority completion pattern was the need to stress the volatility of these analysis given the relatively small size of a number of groups (especially Hispanics and American Indians). Thus, care should be exercised when considering the data and employing these results to implement any policy and/or institutional changes.

Unquestionably, age was the most important demographic factor when determining group differences. The most telling variation was generally found between those graduates 25 years old or younger versus those over 25. Earlier, it was shown that minority graduates were more prone to be non–traditional adults. Likewise, those over 25 years old were more likely to have earned less than 45 HACC credits (Signif. = .000; CC = .31), receive financial aid (Signif. = .004; CC = .14), and have a GPA of 3.00 or higher (Signif. = .000 ; CC = .38). Non–traditional adult graduates were also more likely to select an academic major from the SNAHPE or MET Division, General Studies, or one of the diploma programs.

For the most part the above results generally followed past patterns. For example, since adult students by their age alone are far more apt to have the opportunity to have attended another college or university and thus transfer credits to HACC, it stands to reason that a higher percentage would have earned less than 45 HACC credits. This, plus the fact that non-traditional adults are overrepresented in the short-term diploma programs likely explained the credits earned distribution. Historically, PT adults have established a very fine record of academic achievement and this is reflected best by their GPA when compared to their traditional college-age peers.

That a higher proportion of adults received financial aid differed from past reports since this had not occurred before plus the fact that qualification for support is generally limited to students with six or more credit hours per semester. Apparently, the rising cost of higher education in general and specifically at HACC forced many non-traditional adults to apply for and subsequently qualify for financial assistance.

The distribution pattern between age and academic major (by division) has long been known and this class certainly conformed with their peers from past years. While HACC does not have in place a formal student tracking model (one is tentatively scheduled to be considered during Fall, 1994) nor has a comprehensive study of students' educational goals been completed (due out summer, 1994), it was determined in past graduate studies that traditional age graduates were more likely to be interested in the transfer programs to complete a BA/BS degree whereas non-traditional adults placed greater emphasis on career/technical training. Therefore, the overrepresentation of traditional age students in both C&A and SSPSBE and to a lesser degree in Business comes as no surprise given that these divisions offer many popular transfer options. It is apparent that a large segment of younger graduates eventually migrate to senior institutions.

The findings for the Business Division is not as definitive as one would expect given that the largest transfer program can be found there. This is primarily due to the popularity of many career business majors which ameliorate to a large extent the equally popular transfer option. The distribution between the age and academic major variables can be found in Table 1.

Table 1
Chi Square - Age by Academic Major (by Division)

	BMS	C&A	SNAHPE	MET	SSPSBE	GEN STDS	DIP	TOTAL
LT 20 Yrs	8 30.8%(r) 3.3%(c)	1 3.8%(r) 1.4%(c)	3 11.5%(r) 1.7%(c)	3 11.5%(r) 3.6%(c)	9 34.6%(r) 4.5%(c)	0 - -	2 7.7%(r) 2.5%(c)	26 2.9%
20-22 Yrs	75 25.4%(r) 30.5%(c)	36 12.2%(r) 48.6%(c)	41 13.9%(r) 22.9%(c)	28 9.5%(r) 33.3%(c)	101 34.2%(r) 50.2%(c)	6 2.0%(r) 27.3%(c)	8 2.7%(r) 10.1%(c)	295 33.3%
23-25 Yrs	35 32.1%(r) 14.2%(c)	12 11.0%(r) 16.2%(c)	19 17.4%(r) 10.6%(c)	10 9.2%(r) 11.9%(c)	28 25.7%(r) 13.9%(c)	2 1.8%(r) 9.1%(c)	3 2.8%(r) 3.8%(c)	109 12.3%
26-29 Yrs	42 37.2%(r) 17.1%(c)	4 3.5%(r) 5.4%(c)	34 30.1%(r) 19.0%(c)	14 12.4%(r) 16.7%(c)	11 9.7%(r) 5.5%(c)	4 3.5%(r) 18.2%(c)	4 3.5%(r) 5.1%(c)	113 12.8%
30-39 Yrs	42 21.2%(r) 17.1%(c)	11 5.6%(r) 14.9%(c)	60 30.3%(r) 33.5%(c)	25 12.6%(r) 29.8%(c)	30 15.2%(r) 14.9%(c)	5 2.5%(r) 22.7%(c)	25 12.6%(r) 31.6%(c)	198 22.4%
GE 40 Yrs	44 30.6%(r) 17.9%(c)	10 6.9%(r) 13.5%(c)	22 15.3%(r) 12.3%(c)	4 2.8%(r) 4.8%(c)	22 15.3%(r) 10.9%(c)	5 3.5%(r) 22.7%(c)	37 25.7%(r) 46.8%(c)	144 16.3%
Totals	246 27.8%	74 8.4%	179 20.2%	84 9.5%	201 22.7%	22 2.5%	79 8.9%	885 100.0%

Chi Square = 162.77 DF = 30 Significance = .000 Contingency Coefficient = .39
r = row percentage c = column percentage

Other findings of note among these variables were the greater tendency of C&A, SNAHPE, and SSPSBE graduates to receive financial aid (Signif. = .000; CC = .23) and the underrepresentation among students with a 3.00 GPA or higher to have earned more than 45 HACC credit hours (Signif. = .000; CC = .21). Explanation for the former finding is rather convoluted since it was determined that adult graduates were more likely to receive financial aid at the same time traditional college-age students were more likely to be FT and enrolled in C&A or the SSPSBE Division. It is quite possible that the impact of the SNAHPE Division and the characteristics of their graduates (generally older adults in nursing and allied health) played a critical role, especially since most students in the clinical portion of the program may qualify for support due to their required credit course load equalling six or more hours.

The latter result certainly suggests that transfers and/or those in programs lasting less than two years were more likely to have a higher GPA. One plausible reason may be the difficulty of a number of programs which requires well beyond the 60 credits particularly those in SNAHPE (e.g. RN and allied health) and MET (e.g. Electronics and Mechanical Engineering). Without more information, further explanations would only be conjectures. The next section will review the

educational goals questions, a new section appended to the survey itself.

C. Educational Goals – Descriptive

At the request of the Pennsylvania Commission for Community Colleges, six additional questions were asked of each graduate in an attached addendum. Again, the primary focus of these questions was to determine the graduates' educational goal at HACC and whether it was achieved. The data obtained from the addendum plus the main questionnaire were forwarded to the Commission in their effort to create a state-wide data base for all public community colleges.

The overwhelming majority of graduates indicated that their initial goal at HACC was to complete a degree, certificate, or diploma (Q#1; N=753 or 85.1%). In doing so, the two most frequently cited reasons were to prepare for a new career (Q#2; N=327 or 36.9%) or to complete the first two years of college prior to transferring to a senior institution (N=330 or 37.3%). Two points should be noted. First, the reasons why students wanted to earn a degree/certificate should not be surprising given the mission of HACC and results of past studies indicating that these goals were indeed why they enrolled. However, the large proportion of graduates who indicated other educational goals (N=215 or 24.3%) was somewhat unexpected. Those included graduates who wanted to upgrade present skills (N=99 or 11.2%), explore a new career (N=54 or 6.1%), or for personal interest (N=62 or 7.0%) but their totals pale in comparison to transfer and career preparation.

Another interesting point centered on response to question one. There is a common perception that many graduates matriculate to HACC and other community colleges without established educational goals. It is thought that these students take a course or two, become "hooked on education" and eventually graduate with an AA degree. Results from question one clearly show this to be a <u>myth</u>. The vast majority of graduates either entered HACC with the expressed goal of earning a degree or made a commitment to do so shortly after arriving. Very few "drifted" along in educational limbo for any length of time.

Additionally, preliminary results from a recently completed study (Educational Goal Report) of currently enrolled students during the Spring, 1994 semester indicated that most students and not only graduates, have established educational objectives (though not necessarily completing an entire program) and were striving to achieve them. While a number of students do come to HACC without any set goals, the large majority of graduates and non-graduates alike generally know what they want to accomplish prior to or soon after arriving on campus.

Nearly one in four (N=220 or 24.9%) said that they changed their educational objective while at HACC (Q#3A). Of these, the most frequently cited changes were preparing for transfer (N=109) and preparing for a new career (N=85). It appears that a like number of graduates switched from career and vocation training to a transfer option and vice versa (Q#3B).

The vast majority of graduates either fully (N=585 or 66.0%) or partly (N=274 or 31.0%) accomplished their educational goal (Q#4). Again, this high figure is partly explained by the population surveyed. Since completion of a degree program certainly was a major step in meeting any career and/or educational objective and the study group was graduates, this finding was not surprising.

A fairly large portion of the graduates indicated that they enrolled at HACC because of potential or actual loss of a job or concern about future opportunities (Q#5). As this question likely applied more to students who held a job while attending HACC, it will be interesting to note whether the age factor played an important role. Based on past enrollment patterns, non-traditional adults may have expressed a greater concern over this issue. The bivariate analysis will test this assumption.

The final question (#6) from the addendum asked students whether they would have continued their education had not HACC been available. Over two-thirds of the respondents said they would have studied at another college/university. However nearly a third (N=258 or 29.2%) indicated that without HACC they probably would not have sought more education. This is certainly a critical factor since this accentuates and confirms long held belief that HACC has and continues to provide educational opportunities for many who would not otherwise have had an avenue to participate in higher education. Later, it will be determined whether the extension of educational access was more important for a particular group of graduates over another.

D. Educational Goals - Bivariate

Similar to the demographics and HACC based achievement variables, the questions in the addendum were matched to the gender, age, race, and academic major factors. Determining group differences, and their possible implications to HACC and future graduates will be the primary focus of this analysis. Again, it is important to stress that responses to the educational goals questions were made <u>after</u> the fact and this may have skewed the results.

For the first question in the addendum, "intent to complete program at time of matriculation",

graduates did not differ when matched to sex, age, race, or academic major. Given that this group was composed only of program completers, little wonder no major variations were uncovered. For the most part these students initially enrolled with the goal of program completion and indeed this is just what occurred. Greater differences may be found in the type of educational goals various groups had and not whether this sample differed in their plans for program completion.

When initial educational goal (Q#2 in addendum) was paired with the demographics, several group differences were found. First, females were more likely to have initially planned to transfer or prepare for a new career while males were more apt to be career oriented, upgrading job skills, or earning a degree/certificate for personal enrichment/growth (Signif. = .026; CC = .11). While the data was statistically significant, the low degrees of freedom (4) and the relatively modest contingency coefficient figure suggests that the variations may <u>not</u> be of great value if matched with other variables in a multivariate analysis.

The initial educational objective was far better delineated when paired with academic major (by division). Academic divisions which have popular career programs such as SNAHPE and MET were far more likely to have graduates interested in job and job related training/education (diploma programs are also in this group). Conversely, C&A and SSPSBE had far more students who originally planned to transfer after earning their HACC degree. This was even true of the Business Division though a fairly large proportion were career oriented (certainly the transfer Business Administration-102 program, HACC's largest, played a role). General Studies, not surprisingly, split fairly even between graduates who initially wanted to continue their education from those who were more interested in entering the work force.

Adult students, 25 years and older, were more apt to be concerned with career options and upgrading job skills whereas traditional college-age students were more likely to check the transfer or career exploration options (Signif. = .025; CC = .19). While these are the trends, neither group exhibited as strong a preference for a specific response when compared to the results found with the academic major and initial educational goals. Again, the fairly low contingency coefficient suggests that other factors besides age (and also sex) could be far better predictors of initial educational intent. The distribution of academic major by initial educational objective (Q#2 - addendum) can be found in Table 2.

Table 2
Chi Square - Academic Major (by Division) by Initial Educational Objective

	Transfer	New Career	Upgrade Skills	Career Exploration	Personal	Total
BMS	119 49.0%(r) 36.1%(c)	54 22.2%(r) 16.5%(c)	31 12.8%(r) 31.3%(c)	19 7.8%(r) 35.2%(c)	20 8.2%(r) 32.3%(c)	243 27.9%
C&A	46 62.2%(r) 13.9%(c)	14 18.9%(r) 4.3%(c)	2 2.7%(r) 2.0%(c)	6 8.1%(r) 11.1%(c)	6 8.1%(r) 9.7%(c)	74 8.5%
SNAHPE	21 11.9%(r) 6.4%(c)	119 67.2%(r) 36.4%(c)	26 14.7%(r) 26.3%(c)	7 4.0%(r) 13.0%(c)	4 2.3%(r) 6.5%(c)	177 20.3%
MET	29 35.8%(r) 8.8%(c)	34 42.0%(r) 10.4%(c)	9 11.1%(r) 9.1%(c)	4 4.9%(r) 7.4%(c)	5 6.2%(r) 8.1%(c)	81 9.3%
SSPSBE	104 52.5%(r) 31.5%(c)	52 26.3%(r) 15.9%(c)	15 7.6%(r) 15.2%(c)	11 5.6%(r) 20.4%(c)	16 8.1%(r) 25.8%(c)	198 22.7%
Gen Studies	8 36.4%(r) 2.4%(c)	10 45.5%(r) 3.1%(c)	0 - -	2 9.1%(r) 3.7%(c)	2 9.1%(r) 3.2%(c)	22 2.5%
Diplomas	3 3.9%(r) .9%(c)	44 57.1%(r) 13.5%(c)	16 20.8%(r) 16.2%(c)	5 6.5%(r) 9.3%(c)	9 11.7%(r) 14.5%(c)	77 8.8%
Totals	330 37.8%	327 37.5%	99 11.4%	54 6.2%	62 7.1%	872 100.0%

Chi Square = 195.71 DF = 24 Significance = .000 Contingency Coefficient = .43
r = row percentage c = column percentage

While there was statistical significance between age and whether students changed their educational objectives during the time they were enrolled at HACC, the relationship was fairly weak and the responses were scattered. For example, students from ages 20–22 and those 40 years and older indicated that they did change their educational goal while graduates less than 20 and between 30–39 years old were not as likely to do so.

Not unexpectedly, academic major played a more forceful role. Graduates of SNAHPE, MET, and the diploma programs were less likely to change their educational goal compared to their peers from other divisions. With their career and technical emphasis and the requirement of many fields to secure some type of licensure prior to practicing (e.g. RN and allied health programs), little wonder that these divisions and programs stood out. The extensive requirements and competitive admissions procedures to enter these career programs and later to practice in the field appeared to have attracted students with established educational goals who were far less likely to change.

Conversely, those in divisions with a heavy concentration of transfer experienced far more educational goal changes. Perhaps the "liberal arts" nature of these program attracted students more uncertain about their career choice, unlike career/vocationally oriented graduates. Perhaps those in a transfer program exhibited many of the traits commonly found among BA students at senior schools. For whatever reason, educational objectives were more likely to change among graduates of transfer programs (Signif. = .000; CC = .18).

Accompanying the responses in Q#3A, the number who answered Q#3B was probably more important than their actual responses. Since Business, C&A, and SSPSBE graduates were more likely to change their educational goal in Q#3A, their proportional response should be greater in Q#3B. A review of the data showed that this was indeed the case. Proportionally more Business, C&A, and SSPSBE graduates responded to Q#3B. The answers can be found in Appendix F.

For the most part most graduates were able to accomplish their educational objective while at HACC (Q#4). Differences were found among the ethnic/race and academic major variables but there emerged no clear-cut pattern among these students. Minorities were generally more apt to say they fully achieved their goal whereas white graduates were more likely to say they "partly" accomplished what they had hoped to do (Signif. = .000; CC = .20). A similar convoluted pattern by division emerged as C&A, SNAHPE, MET, and General Studies students were generally more likely to have obtained their objective (Signif. = .001; CC = .19).

Though nearly half (424/868 or 48.8%) of the respondents were concerned about their jobs (Q#5), no important differences were found when matched to the selected demographics. It appears graduates in career programs were slightly more concerned about their jobs (Signif. = .012; CC = .14) but the differences were not readily apparent. No differences were uncovered from the matching of demographics to Q#6, whether one was able to continue education without HACC. This was somewhat surprising given the fairly large group who said they could not continue their education without HACC (N=258). Apparently, the expanded opportunities that HACC affords cut across gender, age, and ethnic/race. Perhaps equally important are the students of all ages, gender, and race who indicated that they would have continued without HACC. HACC is a valued resource but it appears that many students were indeed dedicated when pursuing their educational goals.

In summary, graduates of HACC for the most part enrolled with AA degree completion as their primary goal. That they changed programs and career direction was in keeping with their peers at other institutions, even those offering a BA degree. There were some group differences, primarily based on the academic major variable and to a lesser extent age. In general, students who completed career programs were different from their transfer counterparts though the differences were blurred at times.

For the most part, the data uncovered in the addendum confirmed commonly held notions about community college students in general and HACC graduates in particular. The next section will review answers to the main Six Month Survey beginning with an evaluation of HACC programs.

IV. Program Assessment

A. Descriptive

The first three questions of the survey asked students to assess their academic experience. In rating their academic programs (Q#1), the vast majority said it was either "excellent" (N-316 or 35.7%) or "good" (N=507 or 57.2%). Results from question two found that only one in ten (N=110 or 12.4%) felt the overall program quality "significantly" exceeded their expectations while most said it was "better" than expected (N=299 or 33.8%). Finally, the overwhelming majority said they would recommend their HACC program (Q#3; N=819 or 92.5%).

The above results were neither surprising nor did they differ to any great degree from the responses associated with the past five follow-up studies. The important aspect of this survey as it relates to these specific questions is not the possible discovery of new and profound information but the tangible confirmation that indeed, the vast number of graduates were pleased with their program of instruction.

B. Bivariate

In past studies there were generally little or no differences uncovered in the assessment of programs primarily because of the strong positive responses. However, there were a number of intriguing findings that warrant a review. First, the graduates of the SNAHPE Division were perhaps the most critical when assessing their academic curriculum (Signif. = .045; CC = .18). They were underrepresented in both the two highest categories ("excellent and good") while overrepresented in the "fair" and "poor" categories. While numerous factors likely affected this finding, it is quite possible that the demands and difficulty of many SNAHPE programs such as nursing and allied

health may have affected graduates responses to this questions.

A closer examination of RN graduates did show that they were more apt to be critical of their experience. However, while the results are statistically significant, it should not be lost that the vast majority of these graduates gave strong ratings to their programs and much of the differences were between the "excellent" and "good" choices.

The second group difference found was between graduates with GPAs of 3.00 or higher and those in the 2.00–2.99 range. There was an overrepresentation of 3.00 or higher students in the "excellent" category while proportionally more students in the 2.00–2.99 range answered "good" or "fair" (Signif. = .001; CC = .17). Again, these findings do not suggest the existence of a major problem or concern. Rather, it does show that even though most graduates felt they completed very good programs, their is still room for improvement.

Coinciding with their lower program assessment, SNAHPE students likewise gave a lower expectation ranking as proportionally more said that their academic major either met or fell below what they anticipated. The responses from SNAHPE Divisions graduates were consistent from rating programs to meeting expectations. With this in mind, it was not surprising to learn that SNAHPE graduates, especially those in the RN program, were less likely to recommend their academic major to others (Signif. = .000; CC = .16). This greater tendency to view their program more negatively than their peers was first uncovered in the Class of 1992 survey. Whether this is a long–term trend and the type of remediation and curriculum/instruction changes required to rectify actual or perceived problems are not known at this time. Discovery of this outcome perhaps is the most important initial result of this survey.

Next, matching the program assessment variable (#1) to the "expectation" (#2) and recommendation (#3) questions logically follows. Were students with lower expectations plus those who were less likely to recommend their academic major more apt to assign a lower program rating. When program assessment (Q#1) was paired with expectation (Q#2), a definite dichotomy could be discerned. Graduates who rated their programs as "excellent" were far more apt to say that their academic major "significantly" exceeded their expectations whereas those who gave a "fair" or "poor" assessment were more prone to say that their major was below what they expected (Signif. = .000; CC = .58). Likewise "excellent" and "good" program ratings produced an overrepresentation of "recommendations" compared to the underrepresented percentages of those with "fair" or "poor"

program evaluations (Signif. = .000; CC = .48).

Outside of pairing a number of survey questions together, none of the demographic variables, even those statistically significant, showed major strength (as measured by the CC) in the program assessment section. Intuitively one can easily comprehend the correlation between how a program is rated and whether a recommendation is given. Perhaps the most important result emerging from this data set was that unanimity on the questions of program quality and recommendation (perceived or real) were not characteristics associated with this particular class.

The next part will review employment and employment related factors.

V. Employment Issues

A. Descriptive

The external press on HACC in recent years has highlighted the employment issue, job placement rate and the value of the institution to educate the people of this community for the local job market. While these factors primarily shift with economic conditions which HACC has little or no control over, and they have only a small impact on teaching and learning, it is nonetheless a critical measure of HACC's success in determining congruence between what is claimed and what is actually occurring.

Over eight out of ten graduates were employed either FT (N=555 or 62.7%) or PT (N=181 or 20.5%). These figures varied only slightly from those of previous classes (Q#4). Historically, significant differences have been found between FT and PT employees and this aspect of the analysis will be reviewed in-depth in the next section.

HACC continues to serve a large number of adult students as witnessed by the large proportion of graduates, who have ten or more years of work experience (Q#5; N=279 or 31.5%). The greater emphasis on reaching non-traditional adults was more evident by the category with the next highest total, those with three to six years in the work force (N=165 or 18.7%). Past studies showed that the group with the greatest amount of experience (ten years plus) was followed by the one with the least (less than three years). This was not the case for the Class of 1993. While the differences were fairly small (N=154 for less than three years vs 165 for three to six years), the mere fact that more non-traditional adults have enrolled at HACC suggests that their are possible long-term implications on program mix and how services are delivered. Coincidently, even as the number of

graduates with work experience grew, suggesting more non-traditional adults, recall that the mean age of this class actually dropped from the previous year. Further tracking of future classes is a requisite before any definitive conclusions can be drawn.

While a great many have three, six, and even more years of work experience, a near majority (Q#6; N=442 or 49.9%) have three or less years with their present employer. Apparently, there is a high degree of recent mobility and the data suggest that many graduates accepted new positions even before earning their AA degree. This was best illustrated by the response to question seven. While nearly half of the respondents in the previous question changed jobs within the past three years, only one in four (N=213 or 24.1%) said they earned a raise and/or promotion as a result of completing their HACC program. Without question, the impact of obtaining a HACC degree varied greatly from program to program and from student to student.

Corresponding to the large number of graduates with ten or more years of work experience, those who earned more than $22,000 composed the largest income group (Q#8; N=265 or 29.9%) followed by those earning less than $10,000, the lowest income group (N=138 or 15.6%). Later in the bivariate and multivariate analysis, factors impacting on the income variable will be considered.

Nearly six out of ten indicated that their HACC education was either directly related (Q#10; N=322 or 36.4%) or somewhat related (N=202 or 22.8%) to their current job. Additionally, four in ten (Q#11; N=337 or 38.1%) said their HACC degree was important in securing their current position. Results form these questions were almost identical to those of recent years. Perhaps the most important aspect of these two factors is the interrelationship they historically have had with other employment and demographic factors. For example, an AA degree in nursing would not only be directly related to the job held by an RN but also the single most important factor in securing such a position. Conversely, relationship between job and school and the value a degree may have in securing a job is far more likely to be ambiguous for General Studies majors.

Graduates employed PT generally continued their education (Q#12A; N=112) as only a few indicated a desire to work FT (N=39). Those working FT felt they had either a "career" job with advancement opportunities (Q#12B; N=286) or a steady job (N=119). Finally, the large majority of unemployed graduates were planning to return to school (Q#13; 117/168 or 69.6%).

In the main, the descriptive findings from the employment portion of the survey generally did not

deviate greatly from past classes. While it appears that HACC is serving even more non-traditional adults, a larger proportion are actually younger (mid to late 20s) than their recent counterparts as the overall mean dropped at a time when the number of years in the work force grew. A complete list of job titles (G) and names of employers (H) by curriculum can be found in the appendices.

B. Bivariate and Multivariate

The initial bivariate analyses matched the employment (Q#4), work experience (Q#5), years in current job (Q#6), and annual income (Q#8) to the demographics sex, age, race, and academic major. Additional variables were paired as the need arose to further explain why a distribution occurred and to examine the interrelationship between several factors.

The first notable finding was the small role played by ethnic/race in determining work status, experience, tenure in current job, and income. Unlike the general perception college-wide and even on a national level where race plays such a pervasive role, this was not the case for HACC graduates. Several factors may explain this. First, and most importantly, minorities have been and continue to be well underrepresented in this and <u>all</u> previous classes. Their small numbers (N=47 or 5.3%) only had a minor impact on the distribution.

Next, minority respondents were more like than unlike their majority peers. Their employment goals and experience simply matched fairly well with the group total so little or no major differences were discerned. Finally, and related to the first point, until more minority students graduate form HACC, their small numbers would call into question the reliability of any analysis since minor shifts in the responses could cause major changes in the statistical outcome. The primary result of the ethnic/race variable was the on-going underrepresentation of minority students and their "likeness" to the majority of those who responded.

In the examination of the current employment status question (#4), age, academic major, relationship of job to education, degree a factor in securing current position, and transfer to senior institution were all important indicators. Non-traditional adult students, over 23 years old (Signif. = .000; CC = .22); those who completed a program which was directly related to their current job (Signif. = .000; CC = .24); respondents who said degree was an important factor in securing present position (Signif. = .000; CC = .16); and graduates who did not transfer to a senior institution (Signif. = .000; CC = .45) were far more likely to hold a FT job. This matched past results as these variables have provided an avenue whereby HACC's understanding of who and why various groups

are employed or unemployed is advanced.

Perhaps no other variable in this report is both a good predictor and maintains a complex set of interrelationship with other like employment related factors as academic major (by division). In an earlier discussion, it was found that the age and academic major variables produced important differences as traditional college-age students were more likely to enroll in a transfer program primarily in the C&A, SSPSBE, and to a lesser extent, the Business Divisions. Likewise career oriented divisions such as SNAHPE, MET, the diploma programs, and again less true with business, produced proportionally far more graduates who were either in the work place or had within six months of graduation entered the job market. The interrelationship formed by academic major does not end with employment status variable either. For example, graduates of the SNAHPE Division (less so with MET) were more likely to say their education was directly related to their job (Signif. = .000; CC = .51); their degree/certificate important in securing job (Signif. = .000; CC = .46); and less likely to transfer (Signif. = .000; CC = .36) than peers who completed other programs. Group differences between these variables and academic major likewise resulted in differences with employment status. Table 3 shows the pairing of academic major to employment status.

Table 3
Chi Square - Employment Status by Academic Major (by Division)

	BMS	C&A	SNAHPE	MET	SSPSBE	GEN STDS	DIP	TOTAL
Employed FT	163 29.4%(r) 66.8%(c)	43 7.7%(r) 58.1%(c)	127 22.9%(r) 71.3%(c)	56 10.1%(r) 67.5%(c)	89 16.0%(r) 44.5%(c)	11 2.0%(r) 50.0%(c)	66 11.9%(r) 85.7%(c)	555 63.2%
Employed PT	45 24.9%(r) 18.4%(c)	18 9.9%(r) 24.3%(c)	38 21.0%(r) 21.3%(c)	7 3.9%(r) 8.4%(c)	61 33.7%(r) 30.5%(c)	7 3.9%(r) 31.8%(c)	5 2.8%(r) 6.5%(c)	181 20.6%
Unemployed	36 25.4%(r) 14.8%(c)	13 9.2%(r) 17.6%(c)	13 9.2%(r) 7.3%(c)	20 14.1%(r) 24.1%(c)	50 35.2%(r) 25.0%(c)	4 2.8%(r) 18.2%(c)	6 4.2%(r) 7.8%(c)	142 16.2%
Totals	244 27.8%	74 8.4%	178 20.3%	83 9.5%	200 22.8%	22 2.5%	77 8.8%	878 100.0%

Chi Square = 71.40 DF = 12 Significance = .000 Contingency Coefficient = .27
r = row percentage c = column percentage

Having examined the value of age, relationship of education, factor in securing job, transfer, and academic major and taking into account the interrelationship between these variables among themselves, it is instructive to determine which one(s) would remain important predictors if run as independent variables (IV) to the dependent employment status factor (DV). In the ANOVA, all IVs except for degree was a factor in securing job (Q#11) remained strong predictors of the DV. Even though the other IVs continued to be statistically important, their power in predicting the employment

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status of the graduates varied from one to another. For example, age was excellent in illustrating differences in the bivariate analysis, but its powers fell somewhat in the ANOVA lagging behind transfer, academic major, and relationship of education to job. Apparently the interrelationship between age to the other IVs neutralized, to a degree, the value of this variable as a predictor.

More striking than the predictive order of the IVs was the amount of variance explained by this group of factors. A review of the Multiple Classification Analysis (MCA) results showed that the multiple R squared came to .21. This meant that the five IVs explained 21% of the variance in the MCA, a relatively low figure given the fairly strong relationships uncovered in the bivariate analysis. The most effective predictor was the transfer variable followed by the relationship of education to job factor.

To better understand the impact of the transfer variable, it was matched to the age factor. The findings did confirm that traditional college-age students were more likely to transfer when compared to their adult (over 25 years old) peers (Signif. = .000; CC = .23). While not a startling find, this re-emphasizes how two variables can and do affect each other and how the value of one can be frequently mitigated by another in a multivariate analysis.

Not unexpectedly, results from the work experience variable were fairly similar to years in current job. In both cases age and academic major played a role in discerning differences among the graduates. Certainly it stands to reasons that older students (over 25 years old) would have a far greater opportunity to have more work experience and (Signif. = .000; CC = .63) a longer tenure on their current job (Signif. = .000; CC = .42) than their younger, traditional college-age peers. In the same vein, divisions such as C&A and SSPSBE, with a number of transfer programs attractive to traditional college-age students, were generally overrepresented at the low end of the work experience scale (Signif. = .000; CC = .33) and time on current job (Signif. = .000; CC = .31). To a lesser degree MET graduates also exhibited these traits.

On the surface one can easily determine without complicated analysis what variables would have some influence on annual income. It is certainly logical to find that graduates who were older adults (over 25 years; Signif. = .000; CC = .49), had ten or more years of experience (Signif. = .000; CC = .46), and did <u>not</u> transfer to a senior college/university (Signif. = .000; CC = .33) were far more likely to earn a higher income ($22,000 or more). Besides the more traditional indicators of income, both the "relationship of education to job" and "degree factor securing job" questions were able to

discern differences among the graduate. Students who completed programs with a "direct" relationship to their job (Signif. = .000; CC = .36) as well as those who felt their degree played an important role in securing present job (Signif. = .000; CC = .26) tended to earn more money than their counterparts.

Already, the link between academic major and the "relationship to education" and "degree securing job" have been established as MET and especially SNAHPE graduates were more apt to obtain jobs due to their education and these positions were "directly" related to their HACC program. Likewise, the relationship between age and academic major and age and transfer to senior institution have been confirmed. With these bivariate analyses, it is important to sort out which variable(s) would continue to be an important predictor of annual income when taken together and also if age, academic major, transfer, relationship to job, and important securing job factors can explain much of the group differences between the graduates.

The ANOVA revealed that age was the most powerful predictor of income followed by academic major. Both the transfer and relationship of education to job remained viable but when combined with the other factors they did not have the same impact as suggested by the bivariate runs. More importantly, this set of five DVS explained 40% of the variance as measured by the MCA multiple R square.

Factoring in the "work experience" question as a DV moved it to the top as a predictor while lowering the predictive value of age, confirming once again the high degree of interrelationship. However, the amount of explained variance only increased slightly to .43 or 43%. Confirmation that work experience was the most significant factor underlying the distribution of income is neither unexpected nor enlightening. However, its value centers chiefly on the effect it has on the other IVs and the high degree of interaction the IVs played with each other and how they affected their impact on the DV. Results from the ANOVA matching the DV income to the IVs age, work experience, academic major, transfer, relationship of education, and degree secure current job can be found in Table 4.

Table 4
ANOVA – Income by Age, Relationship, Factor, Transfer, Academic Major, and Work Experience

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Main Effects	1111.445	18	61.74	26.81	.000
Age	88.365	5	17.67	7.67	.000
Relationship to Education	30.623	2	15.31	6.65	.001
AA Factor Securing Job	2.540	1	2.54	1.10	.294
Transfer Senior Institution	24.377	1	24.37	10.58	.001
Academic Major (by Division)	87.905	6	14.65	6.36	.000
Work Experience	89.639	3	29.88	12.97	.000
Explained	1111.445	18	61.74	26.81	.000
Residual	1494.296	649	2.30		
Totals	**2605.741**	**667**	**3.90**		
MCA – multiple R square = .43					

In general, the findings in the employment section of this survey were not greatly different from recent six month studies. Perhaps the most pronounced demarcation is the differences between traditional college-age graduates and their non-traditional adult peers. In nearly all measures this single variable, age, was able to separate one group from another. Non-traditional adults were far more likely to work FT, have ten or more years in the labor market, earn a higher income, complete a major more directly related to their current job, and less apt to transfer.

Another important aspect of the analysis is the very high degree of interaction and interrelationship among the variables. Knowing age plays a significant role in determining income would not explain how other variables likewise impact one one's salary. Thus, the analyses showed the influence age had on curriculum choice, the transfer option, and how it was less vital than work experience in explaining one's income level.

There is no simple formula to comprehend all of the factors and multiple outcomes as they relate to the employment issue for the Class of 1993. Suffice it to say that HACC graduates continued to move successfully into the labor force, some in new careers, others gaining promotions, and still others either seeking a FT position or deferring this pursuit while completing requirements for the

BA degree.

VI. Transfer To Senior Colleges/Universities

A. Descriptive

The number of 1993 graduates who transferred to a senior institution was fewer than two out of every five (Q#14; N=329 or 37.2%). While the percentage is higher than the previous year (1992 = 36.6%), this continues a trend in which a smaller proportion of graduates were continuing their education within six months of completing their HACC program.

It is curious to see two consecutive years when the percentage of students electing to continue their education has actually declined when compared to the 1987-91 period. Perhaps this was due to changing economic conditions; perhaps tuition/cost of transferring was a factor; or perhaps a number of graduates changed their educational goal. It is likely that multiple factors came into play affecting each student differently. Regardless of the reason, it is significant to see that preliminary results suggest that graduates are not matriculating into senior institutions in the proportion they once did. With the addition of questions found in the addendum, this study is able to compare the graduates initial educational goal to what they actually did after leaving HACC.

As in the past, a vast majority of transfer graduates (278/336 or 82.7%) continued their HACC major at their senior school (Q#17). Of course, given the added time and cost that generally accompanies any wholesale shift in one's program, most would be reluctant to change.

Consistently over the past six years, over one in four graduates who transferred (74/326 or 22.7%) encountered some problem in the process (Q#18). The most frequently cited were loss of credits (N=24) or their HACC courses did not meet BA/BS degree requirements (N=27). These results have been a source of concern and HACC has moved to address this issue by moving on two fronts. First, a FT transfer counselor was employed in 1992 with the primary responsibility of facilitating this process and working with potential transfer students. Additionally, the transfer counselor and the HACC administration has worked to improve and/or expand the number of articulation agreements with local colleges and universities. Along the same lines, the community colleges and the Pennsylvania State System of Higher Education are currently negotiating a possible state-wide articulation agreement which would greatly benefit many HACC graduates.

The final question (#20) related to the transfer questions asked graduates if they felt HACC prepared them well academically for work at their present institutions. The large majority either replied that HACC prepared them well (292/371 or 78.7%) or somewhat well (67/371 or 18.1%). For those who transferred there is a near consensus that their HACC education was an excellent stepping-stone prior to moving on to upper division coursework. Appendix I lists all transfer schools by academic major.

B. Bivariate and multivariate

Is there a "typical" HACC transfer student and if so, what are his/her common characteristics? The crosstabulation of the transfer variable to gender, age, race, and academic major revealed that proportionally more non-traditional graduates over 30 years old (Signif. = .000; CC = .23) and those who had an academic major in the SNAHPE Division or one of the diploma programs (Signif. = .000; CC = .36) were far less likely to continue their education. Not surprisingly, most unemployed students who said they were returning to school actually had transferred within the six month period (Signif. = .000; CC = .48).

To further test whether initial educational intent matched actual outcomes, the graduates goals upon matriculation to HACC (Q#1-Addendum) were matched to the transfer variable. While students who had initially planned to transfer did so in proportionally greater number, perhaps an even more important find was the high numbers who did not follow through with their first goal (140/325 or 43/1%). Conversely, a fairly large number who had initially planned to complete only a career program, upgrade job skills, or explore career options did transfer within six months (119/497 or 25.5%), thus increasing the overall transfer count. Certainly these numbers support the notion that many if not most students change their educational goal at least once during the course of their HACC career. Table 5 displays the results of the educational goal by transfer variables.

Table 5
Chi Square - Transfer To Senior Institution by Initial Educational Goal

	Plan to Transfer	New Job	Upgrade Skills	Career Exploration	Personal	Total
Transfer	185 57.3%(r) 56.9%(c)	77 23.8%(r) 24.1%(c)	28 8.7%(r) 29.2%(c)	14 4.3%(r) 26.9%(c)	5 5.9%(r) 31.7%(c)	323 37.9%
Did Not Transfer	140 26.5%(r) 43.1%(c)	242 45.7%(r) 75.9%(c)	68 12.9%(r) 70.8%(c)	38 7.2%(r) 73.1%(c)	41 7.8%(r) 68.3%(c)	529 62.1%
Totals	325 38.1%	319 37.4%	96 11.3%	52 6.1%	60 7.0%	852 100.0%

Chi Square = 82.395 DF = 4 Significance = .000 Contingency Coefficient = .30
r = row percentage c = column percentage

An ANOVA was concluded which matched the age, academic major, initial educational goal, and unemployed status IVs to transfer, the DV. The result showed that those who were unemployed with plans to return to school was the best predictor followed by academic major. Neither initial intent nor age remained significant at the .05 level and the amount of explained variance was .46 or 46% as measured by the MCA multiple R squared.

It is a bit unfair to match initial intent with the unemployed status question because the unemployed status variable partially served to elicit current goal and that would certainly coincide better with current action. However, the matching of these variables proved to be of value because it does confirm that many graduates are unemployed by choice and current educational goals are generally carried out. Interestingly, the age factor did not play an important direct role but this can be explained in part by an earlier discussion which reported that the choice of academic major and those who were unemployed were in large part conditioned by the age of the graduates.

For the second year in a row, the 1993 graduates transferred at a pace below that of their HACC peers from the mid 1980s to early 90s. Students earning a SNAHPE degree or diploma, adults 30 years and older, plus those employed on a FT basis were more apt not to have continued their education. While the overall results did not differ greatly from previous reports, the distribution pattern found in this survey suggests that HACC graduates were finding that obtaining or maintaining a job took immediate precedence over earning a BA degree, at least in the short-term.

VII. Summary and Conclusion

While this is the seventh consecutive graduate survey to employ the optical-scan format and the same questionnaire, the addition of the educational goals addendum provided data not heretofore

available. This allowed HACC to gain some insight to the initial objective of the graduates, whether their goals changed, and the degree to which they accomplished their end goal.

No major shifts in the demographic characteristics were noted for the Class of 1993. Females again composed the bulk of the graduates, minorities were underrepresented, many of the graduates were non-traditional adults, and the class as a whole maintained an excellent academic record. Various crosstabulations confirmed past results such as the overrepresentation of females in SNAHPE and non-traditional adults generally earning higher grades than their younger counterparts. Perhaps the most important finding in the demographic section was the major differences uncovered between students in the traditional college-age category and the non-traditional adults. This certainly has implications on programs and the delivery of services.

Graduates assessment of their programs and expectations differ slightly from past reports. While the vast majority of students rated their HACC experience highly and would recommend their program to others, the data showed a higher degree of criticism from graduates of the SNAHPE Division. This was the second consecutive year that differences between program majors (by division) came to the forefront and it is an especially glaring result given the consistently strong rating for nearly all programs in past reports.

A closer analysis of the distribution found that allied health and especially the RN program graduates were the most critical of their major. Again, these programs are perhaps some of the most difficult to enter and complete at HACC. The pressures and demands of the RN program in obtaining admission, completing the coursework, and mastering the clinical experience is especially telling on a number of graduates and even though they successfully navigated the requirements, their experience evidently was not entirely positive nor did they feel HACC supportive. This was likely reflected in their responses.

One of the prominent points in the evaluation of employment related issues was the great disparity between traditional college-age students and non-traditional adults. In nearly every question distinct lines of separation could be drawn between graduates 26 years and older and their younger peers. Older graduates were far more likely to be employed FT, have more work experience, earn more money, and select a program major directly related to their current job. The reverse was generally associated with graduates less than 26 years old.

The same demarcation was found in the review of the transfer to senior college option. In this section, traditional students were far more likely to graduate from the Business, C&A, and SSPSBE Divisions, all with popular transfer programs, and matriculate to a senior college/university within six months of graduation. Difficulties long associated with the transfer process, such as the loss of credits or courses not meeting BA/BS degree requirements, were again apparent. These numbers (percentages) have undergone only minor changes in recent years.

One of the most significant findings in the transfer portion of this report is the declining proportion of graduates who reported that they actually continued their education. Whereas the percentages had been steadily rising from the mid-1980s to early 90s when nearly half of the graduates said they transferred, now fewer than four in ten stated they did so. The distribution of students between transfer and career curricula has not changed greatly over the past five years so it is not possible to cite growing popularity of vocational/technical programs as the primary reason for this change. Rather, it appears that many recent graduates have decided to postpone matriculation to an upper division school. Cost, employment opportunities, changing educational goals are only some of the possible reasons that can be attributed to the declining transfer rate. Certainly, this must be monitored in future reports to determine whether this is a long-term trend.

Efforts by HACC to aggressively expand and/or enhance articulation agreements with schools popular with transfer students plus the addition of a FT counselor coordinating and facilitating this process may prove to be the key for any long-term increase. Without question, early planning and follow-up activities by the students themselves can go a long way in preventing future transfer difficulties.

Information gained from the addendum, completed at the request of the Pennsylvania Commission for Community Colleges, confirmed that a large majority of HACC graduates matriculated with the established goal of earning a degree. Few were the so-called "casual" student who upon enrolling for a semester or two subsequently decided to complete a degree program. Most students who become graduates carefully planned their educational experience at HACC.

Even though little has been made of minority representation in the Class of 1993, their underrepresentation, especially African American and Hispanic students, continues to be a source of concern. Over the past five to eight years, during a period when increased attention was paid to enhancing minority representation in the student body and on the faculty/staff, the proportion who

graduate remains stagnant. Efforts in the past have mainly focused on the recruitment of minorities and only recently has greater attention been placed on retention.

One positive aspect of the minority graduation figure is the absolute increase in the numbers awarded a degree/certificate. Though the overall percentage of minority graduates has not significantly increased, their actual total number grows with the expansion of each class from year to year. Thus, it is not enough to look solely at proportional representation because those numbers alone would indicate that progress has been nil. Rather, more minority students are graduating as their absolute numbers have increased. However, HACC has also enrolled more majority students and this has suppressed the proportional representation of minorities in recent classes. Minority recruitment and retention will likely remain a long-term concern and challenge and not a "quick fix".

In conclusion, the Class of 1993 generally mirrored the classes which preceded it in recent years. The large majority of graduates felt their experience and program were positive, most either moved readily into the labor market on a FT basis white others took advantage of the transfer option and successfully matriculated to a senior college/university.

The findings certainly reinforced the notion that HACC remained an institution in which people from throughout the community have utilized the educational opportunities afforded them. For many, HACC is their institution of choice.

APPENDICES

APPENDIX A

harrisburg area community college

Six Month Graduate Follow-up Survey
Office of Institutional Research

The Commonwealth of Pennsylvania requires that Harrisburg Area Community College provide information to incoming students concerning the employment and educational status of our graduates. Moreover, HACC seeks to determine the attitudes and perceptions of our recent graduates as a means to assess and enhance our educational programs and services. For these reasons, we request that you take a few moments to complete the following survey. All information provided by you will be treated in a confidential manner. No individual will be identified and the data will be reported in aggregrate form only. Your cooperation in this matter will help HACC better serve the community and future students.

Thank you,

Glen Lum, Ph.D.
Director of Institutional Research

INSTRUCTIONS

- USE NO 2 PENCIL ONLY
- Make marks that fill the circle.
- Make no stray marks.
- Erase cleanly any changes.

IMPROPER MARKS ⊙ ⊗ ◒ ⓂⓂ ◷ PROPER MARK ●

FOLD ON THIS LINE

SOCIAL SECURITY NO.

		–		–				
0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9

Please write your social security number in the boxes to the left. Fill in the circle corresponding to the number in each box.

Note: HACC services are still available to you. Feel free to contact us for job placement or transfer information at 717–780–2522.

1. Generally, how would you rate your academic program at HACC?

○ Excellent ○ Fair
○ Good ○ Poor

2. In relation to your initial expectation, which one statement best reflects your present feelings regarding the overall quality of your program?

○ The quality of my program significantly exceeded my expectations
○ The quality of my program was better than I had expected.
○ The quality of my program was about what I had expected.
○ The quality of my program was below what I had expected.

3. Would you recommend HACC to a person seeking to complete your program?

○ Yes
○ No

4. What is your present employment status?

○ Full-time (Greater or equal to 30 hours per week)
○ Part-time (Less than 30 hours per week)
○ Unemployed (Go to question # 13)

5. How long have you been in the work force?

○ 0–3 years ○ 6–10 years
○ 3–6 years ○ Greater than 10 years

6. How long have you worked for your present employer?

○ 0–3 years ○ 6–10 years
○ 3–6 years ○ Greater than 10 years

7. Did you earn a raise or promotion as a result of completing your program at HACC?

○ Yes
○ No

8. What is your annual gross income?

○ Less than $12,000 ○ $18,000–20,999
○ $12,000–14,999 ○ $21,000–24,000
○ $15,000–17,999 ○ Greater than $24,000

9. What is your present:

a. job title? (Please write in box below.)

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9. b. employer's name? (Please write in box below.)

c. employer's address? (Please write in box below.)

d. supervisor's name and title? (Please write in box below.)

10. To what extent was your training at HACC related to your present job?

- ◯ Directly related
- ◯ Somewhat related
- ◯ Not related

11. Was your degree/certificate from HACC an important factor in securing your present position?

- ◯ Yes
- ◯ No

12. If employed, what one statement best describes your present attitude/perception toward your present job. (Answer either part "a" or part "b"; mark only one answer and then go to question #14.)

a. For graduates working part-time (less than 30 hours per week), I

- ◯ am also attending school (either FT or PT)
- ◯ have not secured a FT position in my field of training but I'm still looking
- ◯ do not wish to work FT nor enroll in school
- ◯ plan to return to school
- ◯ other (Please write in box below)

b. For graduates working full-time (greater than 30 hours per week), my current position is a

- ◯ temporary job while I seek other employment
- ◯ temporary job to earn money to do something else (e.g. return to school)
- ◯ steady job with little/no upward mobility without more experience/education
- ◯ job with career potential
- ◯ other (Please write in box below)

13. If you are unemployed, which one statement best describes your present situation? I

- ◯ am seeking employment (either PT or FT)
- ◯ plan to return to school
- ◯ am not seeking employment nor do I plan to return to school in the near future

14. Have you transferred to another educational institution since graduating from HACC?

- ◯ Yes
- ◯ No (Go to question #21.)

15. If yes, what is the:

a. name of institution? (Write in box.)

b. location of institution? (City and State; write in box.)

16. What is your major? (Please write in box below.)

17. Is your major a continuation of the program which you studied at HACC?

- ◯ Yes
- ◯ No

18. Did you encounter any difficulties transferring?

- ◯ Yes
- ◯ No (Go to question #20.)

19. If yes, what was the single most difficult problem that you faced in transferring?

- ◯ Some credits from HACC did not transfer
- ◯ Some courses did not fulfill requirements
- ◯ Changed major
- ◯ Other (Please write in box below.)

20. In general, do you feel that the education you received at HACC prepared you to succeed academically at your present institution?

- ◯ Yes
- ◯ Somewhat
- ◯ No

21. May we contact your employer for a follow-up survey as mandated by the Commonwealth of Pennsylvania?

- ◯ Yes
- ◯ No

Appendix B

Addendum

The Commission for Community Colleges has requested additional information on HACC graduates. Please take a few extra minutes to answer the following questions. Your responses will be reported in aggregate form and you will not be identified individually. Thank you for your cooperation and assistance.

1. When you first enrolled, did you intend to earn a degree, certificate, or diploma?

   _____ yes _____ no _____ uncertain

2. What was your initial educational objective? (check one)

   _____ Prepare for transfer

   _____ Prepare for new field of work/career

   _____ Upgrade job skills

   _____ Career exploration

   _____ Personal interest/growth

3. a. Did you change your educational objective while at HACC? _____ yes _____ no

   b. If yes, what was your educational objective when you left HACC? (check one)

   _____ Prepare for transfer

   _____ Prepare for new field of work/career

   _____ Upgrade job skills

   _____ Career exploration

   _____ Personal interest/growth

4. Did you accomplish your educational objective? (check one)

   _____ yes, fully _____ yes, partly _____ no

5. Did you enroll because of potential or actual loss of job or concerns about future job opportunities? _____ yes _____ no

6. If HACC were not available, would you have continued your education?

   _____ yes _____ no

Appendix C

harrisburg area community college
ONE HACC DRIVE / HARRISBURG, PENNSYLVANIA 17110-2999
TELEPHONE (717) 780-2300

December, 1993

Dear HACC Graduate:

A few weeks ago the 1993 Six Month Graduate Follow-Up Survey was mailed to you. As yet, the Research Office has not received your response. With the holiday season upon us, I am aware that it may likely be a hectic time of the year for you. However, I would deeply appreciate if you would take a few moments out of your busy schedule to complete the questionnaire. HACC **must** provide the information requested on the survey to the Pennsylvania Department of Education (PDE). State support for HACC's programs is based partly on the post-graduation activities of our graduates. To accomplish gathering this information we need your assistance.

Please be advised that answers provided by you will be treated in a **confidential** manner. **No individual** will be identified as all results are submitted in aggregate form to PDE. Enclosed you will find a copy of the survey plus addendum, a change of address form, an alumni information sheet, and a prepaid return envelope. Again, your help is critical to the success of this project and I would encourage you to help us make HACC a stronger, student centered institution.

Thank you in advance for your time and effort. Feel free to contact the Research Office should you have any questions and my best wishes to you and yours this holiday season.

Sincerely,

Glen Lum

Glen Lum
Director of Institutional Research

1993 Six Month Graduate Follow-Up

APPENDIX D

SURVEY RETURN RATE BY ACADEMIC MAJOR			
CURRICULUM	**MAILED**	**RETURNED**	**PERCENT**
DIPLOMAS			
Auctioneering	54	32	59.3%
Catering/Culinary Arts	1	1	100.0%
Dietary Manager	2	2	100.0%
Salesmanship	2	2	100.0%
Travel and Tourism	4	4	100.0%
Building Codes	10	8	80.0%
Building Historic Preservation	4	3	75.0%
HVAC	29	23	79.3%
Phlebotomy Technician	4	1	25.0%
Welding	2	0	0
Cabinetry	5	3	60.0%
TOTALS	**117**	**79**	**67.5%**
BUSINESS AND MANAGEMENT			
Business Administration	161	133	82.6%
Pre-Teach Business	3	3	100.0%
Accounting/Cert	5	3	60.0%
Business, General/Cert	1	1	100.0%
Micro Software Specialist/Cert	2	2	100.0%
CA-Mainframe Prog Analyst/Cert	1	1	100.0%
HRIM-Food Service/Cert	2	2	100.0%
Office Info Systems Spec/Cert	2	2	100.0%
Para Legal/Cert	3	2	66.7%
Word Processing Technician/Cert	2	2	100.0%
Accounting	15	14	93.3%
Banking	1	1	100.0%
Business Studies	34	28	82.4%
Business Management	9	8	88.9%

1993 Six Month Graduate Follow-Up

APPENDIX D

CA-Mainframe Program Analyst	13	9	69.2%
CA-Microcomputer	8	8	100.0%
Integrated Info Systems Mgmt	2	2	100.0%
Chefs Apprenticeship	1	0	0
HRIM-Food Service	3	2	66.7%
HRIM-Hotel/Motel/Inst Mgmt	2	1	50.0%
Marketing Management	1	0	0
Mktg-Mgmt Real Estate	1	1	100.0%
Mktg Mgmt Retailing	2	2	100.0%
Micro Communication Specialist	1	1	100.0%
Para Legal	2	2	100.0%
Executive Secretary	13	12	92.3%
Legal Secretary	2	2	100.0%
HRIM-Travel & Tourism	5	2	40.0%
TOTALS	**297**	**246**	**82.8%**
COMMUNICATION AND ARTS			
LA-Mass Communication	9	8	88.9%
LA-Performing Arts-Theatre	1	1	100.0%
LA-Communication and Arts	32	26	81.3%
Pre-Tch Communication and Arts	6	6	100.0%
LA-Music	3	3	100.0%
VA-Fine Arts	1	1	100.0%
LA VA-Art and Design	10	9	90.0%
LA VA-Photography	10	9	90.0%
VA-Graphic Design/Cert	1	1	100.0%
VA-Photography	6	4	66.7%
VA-Graphic Design	6	6	100.0%
TOTALS	**85**	**74**	**87.1%**

1993 Six Month Graduate Follow-Up

APPENDIX D

SNAHPE			
LA-Physical Science	4	3	75.0%
LA-Life Science	10	10	100.0%
Pre-Tch Life Science	1	1	100.0%
LA-Pre Chiropractic	1	1	100.0%
Dental Assistant/Cert	7	6	85.7%
Practical Nursing/Cert	36	26	72.2%
Respiratory Therapist/Cert	7	6	85.7%
Respiratory Care Technician/Cert	9	2	22.2%
Dental Hygiene	20	19	95.0%
Medical Laboratory Technician	5	2	40.0%
Nuclear Medicine Technician	4	0	0
Nursing	100	84	84.0%
Radiologic Technology	22	18	81.8%
Respiratory Care Technician	2	1	50.0%
Totals	**228**	**179**	**78.5%**
MET			
Architecture	2	2	100.0%
Math-Computer Science	5	4	80.0%
Engineering	11	6	54.5%
Education-Mathematics	3	2	66.7%
Architectural Technology/Cert	5	3	60.0%
Automotive Technology/Cert	3	3	100.0%
Building Construction Tech/Cert	1	1	100.0%
Electrical/Electronics Tech/Cert	1	0	0
Industrial Automation Tech/Cert	1	0	0
Mechanical Tech/Cert	2	1	50.0%
Architectural Technology	7	6	85.7%
Building Construction Tech	4	2	50.0%
Electrical Electronic Tech	5	2	40.0%

APPENDIX D

Auto Service Education Prog-GM	8	7	87.5%
Electronic Engineering Tech	15	13	86.7%
Industrial Automation Tech	8	5	62.5%
Technology Studies	9	4	44.4%
Mechanical Engineering Tech	26	23	88.5%
Totals	**116**	**84**	**72.4%**
SSPSBE			
LA-International Studies	1	0	0
Social Services	8	5	62.5%
LA-Social Science	56	45	80.4%
Education, Teaching	39	36	92.3%
Education-Social Science	3	3	100.0%
LA-Psychology	5	5	100.0%
Child Care/Cert	3	1	33.3%
Legal Assistant/Cert	6	5	83.3%
Youth Worker/Cert	1	1	100.0%
Education-Early Childhood (PD)	19	16	84.2%
Human Services	7	5	71.4%
Legal Assistant	46	31	67.4%
Criminal Justice	39	28	72.0%
Fire Science Tech/Cert	1	0	0
Police Science/Cert	2	1	50.0%
Fire Science Tech	10	8	80.0%
Police Science	15	11	73.3%
TOTALS	**261**	**201**	**77.0%**
STUDENT SERVICES			
General Studies	34	22	64.7%
GRAND TOTALS	**1138**	**885**	**77.8%**

Note: Five additional surveys returned after completion of data analyses and were not included in survey results.

1993 Six Month Graduate Follow-Up
APPENDIX E
Demographics

Gender			
	Frequency	Percent	Cumulative Percent
Male	341	38.5%	38.5%
Female	544	61.5%	100.0%
Totals	**885**	**100.0%**	

Ethnic/Race			
	Frequency	Percent	Cumulative Percent
African American	29	3.3%	3.3%
Hispanics	3	.3%	3.6%
American Indian	2	.2%	3.8%
Asian	13	1.5%	5.3%
White	838	94.7%	100.0%
Totals	**885**	**100.0%**	

Age			
	Frequency	Percent	Cumulative Percent
Less Than 20 Years	26	2.9%	2.9%
20–22 Years	295	33.3%	36.2%
23–25 Years	109	12.3%	48.5%
26–29 Years	113	12.8%	61.3%
30–39 Years	198	22.4%	83.7%
Greater/Equal 40 Years	144	16.3%	100.0%
Totals	**885**	**100.0%**	
Mean Age = 29.2 Years	Median Age = 31 Years	Range 18–65 Years	

1993 Six Month Graduate Follow-Up
APPENDIX E
Demographics

Academic Major (By Division)			
	Frequency	Percent	Cumulative Percent
Business	246	27.8%	27.8%
Communication & Arts	74	8.4%	36.2%
SNAHPE	179	20.2%	56.4%
MET	84	9.5%	65.9%
SSPSBE	201	22.7%	88.6%
General Studies	22	2.5%	91.1%
Diplomas	79	8.9%	100.0%
Totals	**885**	**100.0%**	

HACC Grade Point Average			
	Frequency	Percent	Cumulative Percent
2.00–2.49	141	15.9%	15.9%
2.50–2.99	277	31.3%	47.2%
3.00–3.49	264	29.9%	77.1%
3.50–4.00	203	22.9%	100.0%
Totals	**885**	**100.0%**	
Mean GPA = 3.05			

1993 Six Month Graduate Follow-Up
APPENDIX E
Demographics

HACC Credits Earned			
	Frequency	Percent	Cumulative Percent
15 Credits	2	.2%	.2%
16–30 Credits	98	11.1%	11.3%
31–45 Credits	95	10.7%	22.0%
Greater/Equal 45 Credits	690	78.0%	100.0%
Totals	**885**	**100.0%**	
Mean HACC Credits Earned = 58.9			

Received Financial Aid			
	Frequency	Percent	Cumulative Percent
Yes	276	31.2%	31.2%
No	609	68.8%	100.0%
Totals	**885**	**100.0%**	

Credits Transferred to HACC			
	Frequency	Percent	Cumulative Percent
Less/Equal 15 Credits	152	17.2%	17.2%
16–30 Credits	103	11.6%	28.8%
31–45 Credits	102	11.5%	40.3%
None	528	59.7%	100.0%
Totals	**885**	**100.0%**	
Mean number of transferred credits ("none" excluded) = 21.6			

1993 Six Month Graduate Follow-Up
APPENDIX E
Demographics

Six Most Frequently Cited Schools Which Transferred Credits to HACC			
Penn State University (all campuses)	34	York College of Pennsylvania	12
Millersville University	22	Indiana University of Pennsylvania	9
Shippensburg University	22	Thompson Institute	7

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#1-Rate Your Academic Program			
	Frequency	Percent	Cumulative Percent
Excellent	316	35.7%	35.7%
Good	507	57.2%	92.9%
Fair	51	5.8%	98.7%
Poor	5	.6%	99.3%
Missing/No Response	6	.7%	100.0%
TOTALS	**885**	**100.0%**	

Q#2-Expectations and Overall Program Quality			
	Frequency	Percent	Cumulative Percent
Significantly Exceeded Expectations	110	12.4%	12.4%
Better Than Expected	437	49.4%	61.8%
About What I Expected	299	33.8%	95.6%
Below Expectations	33	3.7%	99.3%
Missing/No Response	6	.7%	100.0%
TOTALS	**885**	**100.0%**	

Q#3-Recommend HACC Program			
	Frequency	Percent	Cumulative Percent
Yes	819	92.5%	92.5%
No	54	6.1%	98.6%
Missing/No Response	12	1.4%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#4–Employment Status			
	Frequency	Percent	Cumulative Percent
Employed Full–Time	555	62.7%	62.7%
Employed part–Time	181	20.5%	83.2%
Unemployed	142	16.0%	99.2%
Missing/No Response	7	.8%	100.0%
TOTALS	**885**	**100.0%**	

Q#5–Years in Work Force			
	Frequency	Percent	Cumulative Percent
Less Than Three Years	154	17.4%	17.4%
Three to Six Years	165	18.7%	36.1%
Six to 10 Years	134	15.1%	51.2%
Greater Than 10 Years	279	31.5%	82.7%
Missing/No Response	153	17.3%	100.0%
TOTALS	**885**	**100.0%**	

Q#6–Years With Present Employer			
	Frequency	Percent	Cumulative Percent
Less Than Three Years	442	49.9%	49.9%
Three to Six Years	140	15.9%	65.8%
Six to 10 Years	69	7.8%	73.6%
Greater Than 10 Years	87	9.8%	83.4%
Missing/No Response	147	16.6%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#7–Earned Raise or Promotion			
	Frequency	Percent	Cumulative Percent
Yes	213	24.1%	24.1%
No	516	58.3%	82.4%
Missing/No Response	156	17.6%	100.0%
TOTALS	**885**	**100.0%**	

Q#8–Annual Income			
	Frequency	Percent	Cumulative Percent
Less Than $10,000	138	15.6%	15.6%
$10,000–12,999	70	7.9%	23.5%
$13,000–15,999	82	9.3%	32.8%
$16,000–18,999	69	7.8%	40.6%
$19,000–22,000	78	8.8%	49.4%
Greater Than $22,000	265	29.9%	79.3%
Missing/No Response	183	20.7%	100.0%
TOTALS	**885**	**100.0%**	

Q#10–Education Related To Present Job			
	Frequency	Percent	Cumulative Percent
Directly Related	322	36.4%	36.4%
Somewhat Related	202	22.8%	59.2%
Not Related	213	24.1%	83.3%
Missing/No Response	148	16.7%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#11-Degree Important In Securing Present Job			
	Frequency	Percent	Cumulative Percent
Yes	337	38.1%	38.1%
No	397	44.8%	82.9%
Missing/No Response	151	17.1%	100.0%
TOTALS	**885**	**100.0%**	

Q#12A-Employed Part-Time			
	Frequency	Percent	Cumulative Percent
Also Attending School	112	12.7%	12.7%
Looking For FT Job	39	4.4%	17.1%
No FT Work or School	13	1.5%	18.6%
Will Return To School	20	2.3%	20.9%
Other	14	1.6%	22.5%
Missing/No Response	687	77.5%	100.0%
TOTALS	**885**	**100.0%**	

Q#12B-Employed Full-Time			
	Frequency	Percent	Cumulative Percent
Temporary Job	38	4.3%	4.3%
Will Do Something Else	47	5.3%	9.6%
Steady Job-No Advancement	119	13.4%	23.0%
Career Job	286	32.4%	55.4%
Other	47	5.3%	60.7%
Missing/No Response	348	39.3%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#13–Unemployment Status			
	Frequency	Percent	Cumulative Percent
Seeking Employment	40	4.5%	4.5%
Plan To Return To School	117	13.2%	17.7%
No Job Nor School	11	1.2%	18.9%
Missing/No Response	717	81.1%	100.0%
TOTALS	**885**	**100.0%**	

Q#14–Transferred To Another School			
	Frequency	Percent	Cumulative Percent
Yes	329	37.2%	37.2%
No	535	60.4%	97.6%
Missing/No Response	21	2.4%	100.0%
TOTALS	**885**	**100.0%**	

Q#17–Continued HACC Major			
	Frequency	Percent	Cumulative Percent
Yes	278	31.4%	31.4%
No	58	6.6%	38.0%
Missing/No Response	549	62.0%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#18–Encountered Transfer Problems			
	Frequency	Percent	Cumulative Percent
Yes	74	8.4%	8.4%
No	252	28.5%	36.1%
Missing/No Response	559	63.1%	100.0%
TOTALS	**885**	**100.0%**	

Q#19–Most Difficult Transfer Problem			
	Frequency	Percent	Cumulative Percent
Credits Did Not Transfer	24	2.7%	2.7%
Course Did Not Meet Requirements	27	3.1%	5.8%
Changed Major	3	.3%	6.1%
Other	13	1.5%	7.6%
Missing/No Response	818	92.4%	100.0%
TOTALS	**885**	**100.0%**	

Q#20–HACC Education Helped You Succeed			
	Frequency	Percent	Cumulative Percent
Yes	292	33.0%	33.0%
Somewhat	67	7.6%	40.6%
No	12	1.4%	42.0%
Missing/No Response	514	58.0%	100.0%
TOTALS	**885**	**100.0%**	

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APPENDIX F
Survey Results

Q#1-Intend To Earn Degree			
	Frequency	Percent	Cumulative Percent
Yes	753	85.1%	85.1%
No	71	8.0%	93.1%
Uncertain	47	5.3%	98.4%
Missing/No Response	14	1.6%	100.0%
TOTALS	**885**	**100.0%**	

Q#2-Initial Educational Objective			
	Frequency	Percent	Cumulative Percent
Prepare For Transfer	330	37.3%	37.3%
Prepare For New Career	327	36.9%	74.2%
Upgrade Job Skills	99	11.2%	85.4%
Career Exploration	54	6.1%	91.5%
Personal Interest	62	7.0%	98.5%
Missing/No Response	13	1.5%	100.0%
TOTALS	**885**	**100.0%**	

Q#3A-Changed Educational Objective			
	Frequency	Percent	Cumulative Percent
Yes	220	24.9%	24.9%
No	649	73.2%	98.1%
Missing/No Response	16	1.9%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q#3B-Educational Objective When You Left HACC			
	Frequency	Percent	Cumulative Percent
Prepare For Transfer	107	12.1%	12.1%
Prepare For New Career	85	9.6%	21.7%
Upgrade Job Skills	26	2.9%	24.6%
Career Exploration	22	2.5%	27.1%
Personal Interest	17	1.9%	29.0%
Missing/No Response	628	71.0%	100.0%
TOTALS	**885**	**100.0%**	

Q#4-Accomplished Educational Objective			
	Frequency	Percent	Cumulative Percent
Yes, Fully	585	66.0%	66.0%
Yes, Partly	274	31.0%	97.0%
No	14	1.6%	98.6%
Missing/No Response	12	1.4%	100.0%
TOTALS	**885**	**100.0%**	

Q#5-Enroll Due To Job Loss			
	Frequency	Percent	Cumulative Percent
Yes	424	47.8%	47.8%
No	444	50.2%	98.0%
Missing/No Response	17	2.0%	100.0%
TOTALS	**885**	**100.0%**	

1993 Six Month Graduate Follow-Up
APPENDIX F
Survey Results

Q26–Continued Education Without HACC			
	Frequency	Percent	*Cumulative Percent*
Yes	596	67.3%	67.3%
No	258	29.2%	96.5%
Missing/No Response	31	3.5%	100.0%
TOTALS	**885**	**100.0%**	

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Appendix G

Job Titles

DIPLOMA PROGRAMS

010 Auctioneering
Aircraft Mechanic
Auctioneer (5)
Business Owner
Computer Specialist
Driver
Educator/Auctioneer
Equipment Mechanic
Equipment Operator
Filler/Driver
Head of Sales
Janitorial
Machinist Set-Up
Maintenance Mechanic
Owner/Auctioneer
Owner Operator
Production Planning Assistant
Quality Assurance Specialist
Road Driver
Sales Representative
Salesman
Self Employed (2)
Silk Screen Printer/Auctioneer
Supervisor
Warehouser

012 Catering/Culinary Arts
Line Cook

014 Dietary Manager
Certified Dietary Manager

018 Salesmanship
Duplicating Supervisor

019 Travel & Tourism
Bookkeeper
Clerk Typist III
Travel Consultant
Waitress

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Appendix G

Job Titles

021 Building Codes
Carpenter
Codes Enforcement Officer (2)
Job Supervisor
Sales
Self Employed Carpenter
Social Service Aide-3
Steel Worker

025 Building Historic Preservation
Consultant
Plant Equipment Operator
Sr. Inventory Controller/Analyst

028 HVAC
A.C. and Refrigeration Technician
Carpenter/Roofer
Draftsman
Forklift Operator
HVAC Technician (5)
Landlord
Maintenance Director
Maintenance Foreman
Operator
Parts Sales/Receiving/Delivery
Photo Lab Technician
Restaurant Owner
Service Tech
Stocker
Team Member
U.S. Army Recruiter

039 Phlebotomy Technician
Phlebotomist

051 Cabinetry
Sales/Marketing
Senior Supervisor/Labor Relations
Supervisor/Foreman

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Appendix G

Job Titles

BUSINESS AND MANAGEMENT SERVICES

102 Business Administration
Account Executive
Accounting Analyst
Accounting Manager (2)
Accounting Systems Analyst
Accounts Payable
Accounts Payable/Accounts Receivable Clerk
Administrative Officer
Admission Officer
Assistant Community Banking Officer
Assistant Director of Food Services
Assistant Manager
Assistant Store Manager
Bank Teller
Benefits Assistant
Body Shop Manager
Bookkeeper/Wordprocessor
Care Manager
Cashier
Cashier Clerk/Assistant Manager
Clerical Supervisor
Clerk
Clerk I
Clerk Typist
Clerk Typist III
Communication Resource Specialist
Computer Systems Analyst
Consumer Loan Manager
Cook/Closing Supervisor
Customer Service/Data Entry
Customer Service Agent
Customer Service Representative (2)
Data Analyst II
Director of Finance and Operations
Display
Dock Worker
Electrician
Estimator
Executive Secretary
Executive Secretary II
File Clerk
General Manager
Golf Course Attendant in Pro Shop
Instel Analyst

Job Titles

102 Business Administration continued
Intern (CPA Firm)
Inventory Analyst
Inventory Management Specialist
Lab Technician
Mail Handler
Management Analyst
Manager, Field Sales Administration
Membership Clerk
Mortgage Coordinator
Office Assistant (Internship) (2)
Office Clerk
Office Manager (3)
Payroll Clerk
Personnel Assistant
Pinchaser
Product Information Specialist
Product Specialist
Programmer/Analyst
Provider-Inquiry Specialist
Sales Associate (3)
Salesperson
Sash Punch Casement/Basement Line
Secretary
Section Chief
Senior Assistant Manager
Service Representative (3)
Snack Bar Employee
Software Systems Engineer
Sr. Technical Clerk
State Trooper
Stock Clerk
Supervisory Teller
System Technician
Systems Consultant
Tax Preparer
Telephone Representative
Teller (2)
Temporary Employee
Training Coordinator
Waiter
Waitress/Hostess
Warehouse Manager
Warehouseman

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Appendix G

Job Titles

110 Pre-Teach Business
Computer Applications Instructor
Secretary (2)

117 Accounting/Certificate
Accountant II
Accounting Assistant
Bookkeeper

120 Business, General/Certificate
Commodity Coordinator

122 Microcomputer Software Specialist/Certificate
Computer Lab Monitor
Data Processing Technician

124 Computer Applications-Mainframe Program Analyst/Certificate
Computer Systems Analyst

133 HRIM-Food Service/Certificate
Kitchen Utility Worker
Store Personnel

137 Office Information Systems Specialist/Certificate
Encoder
Office Clerk/Cashier

139 Para Legal/Certificate
Secretary
Utilization Review Specialist

143 Word Processing Technician
Medical Transcriptionist
Secretary

146 Accounting
Accounting Assistant
Bookkeeper
Claims Auditor
Computer Operator
Customer Service Representative
General Manager
Internship
Jr. Accountant
Major Medical Coding Examiner
Order Billing Clerk/Export Assistant

1993 Six Month Graduate Follow-Up Survey
Appendix G

Job Titles

146 Accounting continued
Programmer/Analyst
Special Deductions Clerk
Teacher

149 Banking
Bank Clerk

150 Business Studies
Administrative Assistant
Administrative Secretary
Administrative Secretary I
Area Sales Manager
Cable Technician
Clerk Typist II
Community Office Manager
Computer Operator
Corporate Administrative Resources Secretary
Customer Service Representative
Deli Clerk
Donor Records Specialist
Guest Service Representative
Intake Officer
Management and Program Analyst
Materials Analyst
Non-Credit Instructor
Pharmacy Technician
Program Coordinator
Purchasing Assistant
Restaurant/Club Manager
Service Advisor
Supervisor II
Teller II
Temporary Employee (2)

151 Business Management
Assistant Lab Technician
Business Owner
Claims Representative
Pharmacy Support
Procurement Quality Assurance Inspector
Project Analyst
Secretary
Technical Support Specialist

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Job Titles

152 Computer Applications-Mainframe Program Analyst
Computer Programmer
Computer Programmer/Analyst
Electronics Technician
Liability Specialist
Local Area Network Administrator
Programmer
Sr. Programmer Analyst
Systems Programmer

153 Computer Applications-Program Specialist
Accountant/Computer Specialist
Assistant Administrator
Claims Processor
Computer Specialist
Computer Systems Analyst II
Customer Service Analyst
Sr. Logistician
System Support Specialist

156 Integrated Information Systems Management
Computer System Analyst II

168 HRIM-Food Service
Procurement Specialist
Sous Chef

170 HRIM-Hotel/Motel/Institutional Management
Assistant Restaurant Manager

172 Marketing Management-Real Estate
Administrative Assistant

173 Marketing Management-Retailing
Demonstrator

176 Microcomputer Communication Specialist
Network Analyst

185 Para Legal
Collection Officer
Office Manager

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Job Titles

192 Executive Secretary
Administrative Secretary
Candy Packer
Faculty Secretary
Management Secretary
Office Manager
Secretary (5)
Staff Assistant V

193 Legal Secretary
Legal Secretary (2)

198 HRIM-Travel and Tourism
Cashier

COMMUNICATION AND THE ARTS

206 LA-Mass Communication
Cashier/Food Ticketer
Clerical Clerk
Daycare Teacher/Restaurant Manager
Laborer
Package Handler
Teller

208 LA-Performing Arts-Theatre
Receptionist/Data Entry

209 LA-Communication & Arts
Administrative Assistant
Advertising Consultant
Associate Agent
Associate Quality Assurance Specialist
Computer Control Clerk
Customer Report Administrator
Customer Service Representative/Correspondence
Desk Coordinator/Server
Dockworker/Lifeguard
Documentation Specialist
Head of Benefits Department
Human Resources Administrator
Memorial Counselor
Metallurgical Observer
Public Relations Assistant
Sales

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Appendix G

Job Titles

209 LA-Communication & Arts continued
Sales Clerk
Self Employed/Sales
Special Claims Representative I
Teller
Unemployment Claims Interviewer
Waitress

210 Pre-Teach Communication & Arts
Corporate Painter
Insurance Clerk
Sales Floor Associate
Settlement Clerk
Substitute Teacher

211 LA-Music
Customer Contact Employee
Nursing Assistant

212 VA-Fine Arts
Framer

213 LA VA-Art & Design
Acquisition Assistant
Graphic Designer
Jewelry Counter Associate
Laborer
System Analyst
Teacher

214 LA VA-Photography
Assistant Superintendent
Food Inspector
Framing Associate
Fuel Oil Delivery Driver
Photo Printer
Photographer
Sales
Shift Supervisor
Waiter

220 VA-Graphic Design/Certificate
Paste-Up Artist/Graphic Designer

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Job Titles

282 VA-Photography
Food Service Employee
Owner-Photography Studio/Waitress
Photographer

284 VA-Graphic Design
Cook
Graphic Designer
Graphics (Design Textbooks)
Typesetter

SNAHPE

307 LA-Physical Science
Waiter

309 LA-Life Science
Cashier
Credit Assistant
Framer/Pharmacy Technician

314 LA-Pre Chiropractic
Chef/Manager

320 Dental Assistant/Certificate
Dental Assistant (4)
Oral Surgical Assistant
Orthodontist Assistant

327 Practical Nursing/Certificate
LPN (24)

337 Respiratory Therapist/Certificate
Casual Respiratory Therapist
Certified Respiratory Therapy Technician
Registered Respiratory Therapist
Respiratory Therapist
Respiratory Therapy Technician (2)

339 Respiratory Care Technician/Certificate
Respiratory Therapist Technician (2)

349 Dental Hygiene
Dental Hygienist (19)

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Job Titles

358 Medical Laboratory Technician
Lab Technician

368 Nursing
Charge Nurse (3)
Director of Wellness
Emergency Department Manager
Graduate Nurse
Nursing Supervisor
Office Nurse
Per Diem Clinic Nurse/Childbirth Educator (in training)
Registered Nurse (63)
Staff Nurse (7)

375 Radiologic Technology
Medical Secretary
Pharmacy Technician (2)
Radiographer (3)
Radiologic Technician (2)
Radiologic Technologist (6)
Sales Coordinator
Transcriptionist

389 Respiratory Care Technician
Graduate Respiratory Therapist

MET

401 Architecture
Hostess

403 Math-Computer Science
Store Accountant/Clerk

412 Engineering
M.O.C.C. Planner
Sales Clerk

417 Architectural Technology/Certificate
Draftsman
Draftsman/Surveyor
Engineer Technician

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Job Titles

420 Automotive Technology/Certificate
Auto Technician
Mechanic
Semi-Skilled Laborer

425 Building Construction Technology/Certificate
Senior Resident Project Representative

435 Mechanical Technology/Certificate
Retail Sales Person

447 Architectural Technology
Designer/Draftsman (2)
Draftsman
Estimator
Product Consultant/Estimator

451 Building Construction Technology
Construction/Code Inspector
Engineering Assistant

456 Electrical Electronic Technology
Senior Shift Manager
Technician

457 Automotive Service Education Program-GM
Auto Technician (4)
Gas Attendant/Mechanic
Sales Associate
Truck Driver

458 Electronic Engineering Technology
Aircraft Mechanic
Communications Operations Spec. II
Electrical Machine Maintenance Technician
Electronic Systems Engineer
Engineer Co-op
Field Tech I
Pharmacy Technician
Produce Clerk
Technician (2)

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Job Titles

463 Industrial Automation Technology
Cashier
Electro-Mechanical Technician
Electronic Controls Mechanic
Tool Maintenance

468 Technology Studies
CADD Operator
Night Manager

470 Mechanical Engineering Technology
Computer Aided Designed
Design Draftsman (2)
Designer Drafter
Dockworker
Drafter
Estimator/Drafter
Lab Specialist
Manager, Manufacturing Development
Manufacturing Engineer
P.T. Aide
Package Handler/Sorter
Sales Engineer
Stock Merchandiser
Technician/Toolmaker
Tool Designer

SSPSBE

506 Social Services
Client Development Assistant
Counselor Trainee
Developmental Assistant
Nanny
Postmaster

509 LA-Social Science
Analyst
Assistant Hairdresser
Assistant Produce Manager
Bank Teller
CNA
Cafeteria Worker
Cashier
Certified Nursing Assistant

Job Titles

509 LA-Social Science continued
Computer Lab Technician/Assistant Electronics Tech
Cook
District Manager
Dog Groomer
Elementary School Teacher
Employment Security Specialist II
Flight Operations Sergeant
Living Skills Instructor
Owner/Landscaping Service
Program Specialist
Receptionist/Secretary
Secretary
Staff Assistant IV
Teaching Assistant
Video Clerk
Volunteer Coordinator
Waitress

513 Education, Teaching
Assistant Teacher
Clerical Assistant
Coordinator
Custodial Guide
Daycare Center Aide
Daycare Owner/Administrator
Daycare Teacher
Front Desk Clerk
Jewelry Sales Consultant
Resident Assistant
Sales Associate
School Bus Driver
Secondary Marketing Secretary/Clerk
Secretary
Substitute Teacher (2)
Waitress (2)

514 Education-Social Science
Clerk

515 LA-Psychology
Cashier
Recreational Assistant
Sales Clerk

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Job Titles

530 Legal Assistant/Certificate
Assistant Manager
Assistant Treasurer
Geotechnician
Paralegal
Self Employed Consultant (Geologist & Engineer)

542 Youth Worker
Residential Administrator

550 Education-Early Childhood (PS)
Anesthesia Tech.
Assistant Group Supervisor
Assistant Teacher (2)
Developmental Manager
Group Supervisor
Lead Assistant Teacher
Nanny
Nanny/Housekeeper
Pre-Kindergarten Teacher
Pre-School Teacher
Substitute Early Education Assistant
Teachers Aide
Teaching Assistant

555 Human Services
Activities Director
Counselor's Assistant
Houseparent-Residential Teacher
Pre School Family Education Instructor
Professional House Parent

570 Legal Assistant
Assistant Manager
Associate Legal Assistant
Clerk, Medical Records
Cocktail Waitress
Data Entry Clerk
Drug Enforcement Administrative Assistant-Secretary
Environmental Health Worker
HEAL Loan Processor
Laborer
Legal Assistant (2)
Legal Secretary (2)
Paralegal/Legal Secretary
Paralegal/Office Staff

Job Titles

570 Legal Assistant continued
Paralegal (3)
Produce Clerk
Public Relations Assistant
Real Estate/Paralegal
Retail/Sales Clerk
Sales (Sporting Goods)
Secretary/Receptionist
Self-Employed
Temporary Office Clerk
Transcriptionist/Office Manager

605 Criminal Justice
Cashier/Meat Wrapper
Central Station Operator
Correctional Officer
Correctional Officer/Deputy Sheriff
Customer Service/Head Cashier
E.M.T.
Loss Prevention Officer
Manager
Night Supervisor
Office Worker
PA State Police Cadet
Personnel Manager
Physical Security Specialist
Pizza Deliverer (Driver)
Sales Clerk
Salesman
Secretary
Security Detective
Store Detective/Loss Prevention
TE Distribution Clerk
Waitress

638 Police Science/Certificate
Police Officer

663 Fire Science Technology
Emergency Medical Technician (2)
Fire Department Lieutenant
Firefighter
Journeyman Sprinkler Fitter
Maintenance
Production
Telecommunicator II

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Job Titles

680 Police Science
E.M.T.
Loss Prevention Associate
Loss Prevention Manager
Nursing Assistant
Public Safety Officer
Sales Clerk
Security
Stockman
Telecommunicator

STUDENT SERVICES

765 Liberal Studies
Medical Assistant Instructor

766 General Studies
Bank Teller (2)
Coordinator
Courtesy Clerk
Dental Assistant
Executive Secretary
General Manager
Medical Receptionist
Medisgroups Abstractor
Preschool Teacher
Self-Employed (2)
Stock Attendant
Waitress

1993 Six Month Graduate Follow-Up Survey
Appendix H

Employers

DIPLOMA PROGRAMS

010 Auctioneering
Aston Auctioneers
Bordens
Caldwell-Banker Real Estate Company
Domino's
Elk Lake School District/Aston Auctioneers
Ford New Holland
H. B. Reese/Hershey Foods Corp.
Hoover's Auction Service
Hummer Turfgrass Systems
Impact Manufacturing
Masonite Corporation
MG Industries
Overnite Transportation Company
Sandy Jo Roemer & Associates Hire-A-Buyer
Self (4)
U.S. Government (2)
Yellow Freight
Yorktowne Auto Sales

014 Dietary Manager
Country Meadows, Leader Heights

018 Salesmanship
Commonwealth of Pennsylvania Liquor Control Board

019 Travel & Tourism
Cafe Sam
Commonwealth of Pennsylvania Department of Public Welfare
Pennsy Supply Inc.
Travel Agents International

021 Building Codes
Bethlehem Steel
Borough of Highspire
Dauphin County Social Services for Children & Youth
Swatara Township
TAM Systems Inc.

025 Building Historic Preservation
Dayton Parts, Inc.
Hampden Heritage Associates
Pennsylvania Power & Light Company

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Employers

028 HVAC
H.B. McClure
Herco Inc.
Hershey Chocolate Company (2)
Keystone Oil Products Corporation
Kottcamp Sheet Metal
Milton Hershey School
Romeo LaMarco, Contractor
Penn State (Harrisburg) (2)
Sarah Todd Home
Self (2)
U.S. Army
Vincent R. Boltz, Inc.
Wal-Mart (2)
Zimmerman Plumbing & Heating

039 Phlebotomy Technician
Holy Spirit Hospital

051 Cabinetry
Bethlehem Steel Corp.
Bradford Forest Products

BUSINESS AND MANAGEMENT SERVICES

102 Business Administration
ADT Data Systems, Inc.
AMP, Incorporated (5)
ARA Dining
Bell Telephone of Pennsylvania
BlockBuster Video
Blue Shield (2)
Bon-Ton
Buddy Bi-Rite Rentals
Bureau of Information Systems Comptroller Operations
Century 21 G&B Associates
Chuck Hollenbaugh
Colony House Restaurant
Commonwealth of Pennsylvania (2)
DAFCU
Dauphin Deposit Bank (2)
Dean Witter
Delta Air Lines
E. N. Dunlap
E.C.D. Services

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Employers

102 Business Administration continued
EDS
EUR Data Center, Inc.
Excel Temporary Service
Feeser's Food Distributors
First Federal Savings & Loan
Flight Lanes (JOMA)
General Assembly of Pennsylvania
Good's Furniture Inc.
HACC
Hale's Market
Harris Savings Bank
Hershey Medical Center
International Service Center
Irving Shoes
Kaufmann's Department Store
Kreider's Kritters, Inc.
Lawyer Trust Account Board
Legislative Budget and Finance Committee
Little Johns Family Restaurant
Manada Golf Course
Met-Ed
Metal Industries, Inc.
Mt. St. Mary's College
Nationwide Insurance Company
Navy Ships Parts Control Center
North Carolina State University
PMA
PNC Bank (2)
PPO&S, Inc.
P.P.&L. Company
Pennsylvania Air National Guard
Pennsylvania Blue Shield (4)
Pennsylvania Department of Transportation
Pennsylvania Fish & Boat Commission
Pennsylvania Insurance Department
Pennsylvania National Guard
Pennsylvania State Police
Pippin's (HERCO) – Hershey Park
Pizza Hut
Reeves Hoffman Division/Dynamics Corp of America
Ridge View Pallets
Rite Aid Corp.
S&A Custom Built Homes, Inc.
Sears Roebuck & Company (2)
Shenk & Title Sporting Goods

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Employers

102 Business Administration continued
Soil Resources, Ltd.
Tressler Lutheran Services
United States Postal Service
United Telephone Company of Pennsylvania (3)
U.S. Postal Service
Weis Markets
Wintrode Buick, Chevrolet, Olds., Inc.

110 Pre-Teach Business
Geller Real Estate
HACC Lancaster Campus

117 Accounting/Certificate
Hanover Agway
KHP Central/PBS

120 Business, General/Certificate
Hershey Foods Corp

122 Microcomputer Software Specialist/Certificate
HACC (Lebanon Campus)

124 Computer Applications-Mainframe Program Analyst/Certificate
Pennsylvania Department of Revenue

133 HRIM-Food Service/Certificate
John Blessing
Masonic Homes Retirement Community

137 Office Information Systems Specialist/Certificate
Dyn Corp
Weis Markets

139 Para Legal/Certificate
Pennsylvania Blue Shield

143 Word Processing Technician
Milton S. Hershey Medical Center
R.E. Wright Associates, Inc.

146 Accounting
Bennington
Camp Hill School District
Capital Blue Cross
Central Dauphin Area Income Tax Office

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Employers

146 Accounting continued
Chem-Nuclear Systems, Inc.
EMLICO
First National Bank of Fredericksburg
Gehl Company
Krautkramer Branson
Sterling Lebanon Packaging Corporation
Super Rite Foods

149 Banking
PNC Bank

150 Business Studies
AMP, Inc. (2)
American Water Works Service Company
County of Adams
DDRE-RB
EDS
HACC
Hampton Inn
Hartman Motor Cars
Hershey Chocolate USA
Meridian Bank
Modern Woman
Moss Creek Plantation
Pennsylvania Blue Shield
Pennsylvania Housing Finance Agency
Peoples Drug Store
Personnel Pool
PHEAA/SLSC
Philhaven Hospital
Tarmac Equipment Company
Unitas National Bank

151 Business Management
Continental Medical Systems (CMS)
Diane R. Moole (Self Employed)
General Public Utilities Nuclear
Inservco
KHP Services, Inc.
Millersburg Area Authority
National RX Services Inc.
RESMA Realty Advisors

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Employers

152 Computer Applications-Mainframe Program Analyst
AMP, Inc.
Applied Information Sciences, Inc.
Dauphin County
Dauphin Deposit Bank (2)
Legislative Data Processing
Pennsylvania Blue Shield
U.S. Naval Reserves

153 Computer Applications-Program Specialist
AMP, Inc.
Aetna Insurance Company
Pennsylvania State Treasury
Pennsylvania Travel Council
Rite Aid Corp.
Self
U.S. Navy

156 Integrated Information Systems Management
Pennsylvania Department of Welfare

168 HRIM-Food Service
Little Johns Family Restaurant
Mil-Base Industries, Inc.

170 HRIM-Hotel/Motel/Institutional Management
HERCO

173 Marketing Management-Retailing
Sam's Club

176 Microcomputer Communication Specialist
ALCOA

185 Para Legal
Commonwealth of Pennsylvania (Office of Attorney General)
Marshall Dennehey

192 Executive Secretary
Claims Management Services
Delta Development Group, Inc.
HACC (2)
Hershey Chocolate USA
Hershey Foods Corporation Chocolate Division
Hershey Medical Center
Manpower

Employers

192 Executive Secretary continued
Michael Sedor
Pennsylvania Housing Finance Agency (2)
RBS Fab, Inc.

193 Legal Secretary
John M. Wiley
Metzger, Wickersham, Knauss & Erb

198 HRIM-Travel and Tourism
Turkey Hill Minit Market

COMMUNICATION AND THE ARTS

206 LA-Mass Communication
BJ's Wholesale Club
Dauphin Deposit Bank
H.B. Reese Candy Company
Jill Harris & Pat Gibson
Pennsylvania Department of Revenue
RPS

208 LA-Performing Arts-Theatre
Family Practice Association

209 LA-Communication & Arts
Book of The Month Club
Bryn Mawr Rehab
Capital Blue Cross
Carolina Freight & Ember's Inn
Commonwealth of Pennsylvania
Ernie Parks
Express/Croc N'Berrys
Fries Etc.
Harris Savings Bank
Hershey Chocolate U.S.A.
Hershey Foods, Inc./Harrisburg News Company
Hotel Hershey
Nationwide Insurance (2)
OC 104 (WOCQ) FM
Pennsylvania Steel Technologies
Pitney Bowes Management Services
Self
William Howard Day Cemetery

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Employers

210 Pre-Teach Communication & Arts
Builder's Square
Lebanon County Vo-Tech
Leesburg/Sterling Family Clinic
Mid Penn Bank
Outdoor World

211 LA-Music
AT&T
Messiah Retirement Center

212 VA-Fine Arts
Artworks

213 LA VA-Art & Design
Ames Department Store
Barkleigh Production
Book of The Month Club
East Shore Area Library
Naval Sea Logistic Center

214 LA VA-Photography
Kelly Oil Company
Legacy Homes
Metrophoto
Michael's
Olive Garden
Pennsylvania Department of Agriculture
Ritz Camera
Thomas Angelo Studio
Wendy's

220 VA-Graphic Design/Certificate
Horton Printing Company

282 VA-Photography
Self
Stacey Snyder & Marvin Lenker
Wendy's

284 VA-Graphic Design
Atlis Graphics and Design, Inc.
Birch Knoll Inn
Camp Hill Art Press
Long's Machine & Tool
Self

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Employers

SNAHPE

307 LA-Physical Science
Friendly's Restaurant

309 LA-Life Science
Ben Franklin
Hershey Foods
RX Place

314 LA-Pre Chiropractic
Peppers

320 Dental Assistant/Certificate
Dipietro, Diminicle & Hilton
Dr. Peter Friedman
G. David Kulsun, D.M.D.
Malchodi & Klein
Miller Oral Surgery

327 Practical Nursing/Certificate
Blue Ridge Haven West
Carlisle Hospital
Carlisle Pediatric Associates
Church of God Home
Country Meadows
Cumberland Crossings Rehabilitation Center
Cumberland Crossings Retirement Community
Dauphin Manor Home & Hospital
Duke Convalescent & Nurses Available
Harrisburg Hospital
Holy Spirit Hospital (5)
Kimberly Quality Care
McCready Hospital
Mechanicsburg Rehab Renova
Messiah Village (2)
Philhaven Hospital
Polyclinic Medical Center
Rehab Systems
Susquehanna Nursing Rehabilitation Center
The Mennonite Home

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Employers

337 Respiratory Therapist/Certificate
Carlisle Hospital
Hershey Medical Center
Homeco
Mercy Hospital
Polyclinic Hospital

339 Respiratory Care Technician/Certificate
Reading Hospital & Medical Center

349 Dental Hygiene
Alan Snyder DDS
Bruce R. Dietman DDS
Colonial Dental Group
Dental Care Associates
Dental Implant Prosthetics
Dental Power
Dr. Chiappa
Dr. Dunn & Dr. Pacey
Dr. Eric Unger, D.D.S.
Dr. John Maynard & Drs. Kravitz & Miller
Dr. Kravitz & Miller
Dr. Peter J. Ross DMD
Drs. Kathleen Kopecky-Groh, Terry Reese & William Warren
Melvin Barber D.D.S.
Robert T. Kramer D.M.D.
West Hartford Family Dentistry

358 Medical Laboratory Technician
Holly Milk

368 Nursing
Blue Ridge Haven West
Carlisle Hospital (5)
Chambersburg Hospital
Columbia Hospital
Community General Osteopathic Hospital (5)
Community Hospital of Lancaster
Country Meadows Leader Heights
Ephrata Community Hospital
Francis Scott Key Medical Center
Gettysburg Hospital
Harrisburg Hospital (6)
Harrisburg State Hospital (3)
Hershey Medical Center (7)
Holy Spirit Hospital (3)

Employers

368 Nursing continued
Kandra, Fierer, Kuskin Associates Ltd & Polyclinic Medical Center
Leader Nursing & Rehabilitation Center (2)
Leader Nursing & Rehabilitation Center (West) (2)
Lewistown Hospital
Maryland Institute of Emergency Medical Service Systems
Mechanicsburg Rehabilitation System (3)
Memorial Hospital
Pennsylvania State Correctional Institute
Philhaven Hospital
Polyclinic Medical Center (14)
South Mountain Restoration Center (2)
South Mountain Restoration Center & Commonwealth of Pennsylvania (DPW)
Thornwald Home
University Pittsburgh Medical Center
Veterans Administration Medical Center
York Hospital (3)
York United Methodist Home

375 Radiologic Technology
Arlington Orthopedics Clinic
Holy Spirit Hospital (3)
J.R. Kreiser, MD
James A. Manning, Jr., M.D.
Mediq W-Ray & EKG
Orthopedic Surgery Center
Polyclinic Medical Center (2)
Sears
Smith Radiology Inc.
WalMart Pharmacy

389 Respiratory Care Technician
Lancaster General Hospital

MET

401 Architecture
Joe's American Bar & Grill

403 Math-Computer Science
Giant Foods

412 Engineering
Allegheny Airlines
KMart Corporation

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Employers

417 Architectural Technology/Certificate
Dauphin Engineering Company
Gannett Fleming
Timber Tech Engineering, Inc

420 Automotive Technology/Certificate
Boro of Ephrata
East York Exxon
Pennsylvania Department of Transportation

425 Building Construction Technology/Certificate
HRG, Inc.

435 Mechanical Technology/Certificate
Boscov's

447 Architectural Technology
Biggs Building Specialties
Furnley H. Frisch & Sons
Mid-State Inc.
Zimmerman Homes

451 Building Construction Technology
Borough of Carlisle
Sprint United

456 Electrical Electronic Technology
AMP Inc.
Capitol Pavilion

457 Automotive Service Education Program-GM
John H. Steffy Inc
Jones Pontiac Co.
Moyer's Texaco
New Penn
Performance Chevrolet, Inc.
Rufe Chevrolet
WalMart

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Employers

458 Electronic Engineering Technology
AMP Inc.
Festival Foods
Graybill's Tool & Die Inc.
McCoy Electronics
Pennsylvania State Police
People's Drug
Syntonic Tech, Inc.

463 Industrial Automation Technology
Defense Depot Regions East
InterCon Systems Inc
Larry's Service Center
Manley Value Corp.

468 Technology Studies
Gannett Fleming
Weis Markets

470 Mechanical Engineering Technology
AMP Inc. (3)
Childrens Care Center
General Refractories Company
HACC
Hain's Pattern Shop Inc.
Jamesway Corp.
Keystone Railway Equipment Company
Masland Industries
McClure Company Mechanical Contractors
Phoenix Contact Inc.
Schaedler Brothers, Inc.
United Parcel Service
Watkins Motor Lines

SSPSBE

506 Social Services
Alternative Rehabilitative Communities Inc.
Children's Care Center Inc.
Jill Smith
Life Support Facility
U.S. Postal Service

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Employers

509 LA-Social Science
Bonanza
Charlestown Community, Inc.
Continuing Developmental Services
Craig Brown
Cumberland-Perry Association for Retarded Citizens
ECC Retirement Village
First Commercial Development Company
Giant Foods
Hardee's
Jewish Home of Greater Harrisburg
Lower Dauphin School District
Outlooks for Hair
Pennsylvania Department of Labor & Industry
Pennsylvania National Guard U.S. Army
Pennsylvania State University
Pennsylvania State University Milton S. Hershey Medical Center
Senator Tim Shaffer
Shippensburg University/HACC
Spring/United Telephone
Teggy Smith
U.S. Railroad Retirement Board
West Shore School District

513 Education, Teaching
Allshouse Commodity Marketing
Central Dauphin School District
Discovery School Daycare Centers
Hardings Restaurant
Harris Savings Bank
Interfaith Family Services
KinderCare Learning Center
Lebanon County Schools
Little Brown Bear's Day Care, Inc.
Paxton United Methodist Church Day Care
Phoenix Contact
Ponderosa Steak House
Ramada Inn
Roadway Package Service
The Sports Authority
Wal-Mart
West Shore School District & Northeastern School District

514 Education-Social Science
Long John Silvers
Weis

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Employers

515 LA-Psychology
Giant
Hess's Department Store

530 Legal Assistant/Certificate
G.C.I. Environmental Services
Heilsel, Inc.
Kouchoukos & Associates, Inc.
Payless Shoe Source
Self

542 Youth Worker
Milton Hershey School

550 Education-Early Childhood (PS)
Carlisle YMCA Child Care Center
Dickinson College Children's Center
Hildebrandt Learning Center
KinderCare (2)
Learning Ladder
Perry County Daycare/Shermansdale
Phoenix Services, Inc.
Private Home Care
Susan Smith
Tender Years
Wee Care Day School
York Hospital

555 Human Services
Brookline Retirement Village
First Step Program of Goodwill Industries
Milton Hershey School (2)
SETCO

570 Legal Assistant
Central Pennsylvania Legal Services
Dr. Daniel Romm
Friedman & Friedman, PC
Hershey Foods Corp.
Hershey Medical Center
Keith A. Blank
Kinder Bin Kids
Marriott Hotel
Martson, Deardorff, Williams & Otto
Metal Industries
Milton Hershey School

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Employers

570 Legal Assistant continued
Nikolaus, Hohenadel & Umberhaver
PathMark
PHEAA
Polyclinic Medical Center
Preferred Temps, Inc.
Reed, Smith, Shaw & McClay
Stephen C. Nudel, Esquire
Stevens & Lee
Subway
Thomas S. Cook
W&L Sales, Inc.
York County District Attorney's Office

605 Criminal Justice
BJ's Wholesale Club
Boscov's (2)
Christian Publication, Inc.
Colony House
Defense Distribution Region East, Defense Logistics Agency
Giant Foods
Hershey Medical Center
Hess' Department Store
John Yoder
Pennsylvania Department of Corrections
Pennsylvania State Police
Pizza Hut
Snyder County Prison & Sheriff's Department
Stauffer's of Kissel Hill
Stroehmanns Bakery
Susquehanna Township E.M.S.
Tracking Systems Corp.
United States Postal Service
WalMart

638 Police Science/Certificate
Manor Township Police

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Employers

663 Fire Science Technology
Anne Arundel County Fire Department
Camp Hill E.M.S.
City of Harrisburg
Grinnell Fire Protection
East Lampeter Ambulance Association
Lancaster County-wide Communications
Manheim Auto Auction
Redner's Warehouse Markets

680 Police Science
Harrisburg East Mall
Hess's Department Store
Kepler's Seafood
Lebanon County Emergency Management Agency
Servigard
WalMart (2)
White Rose Ambulance
York Hospital

STUDENT SERVICES

765 Liberal Studies
Cumberland Perry Area Vocational Technical School

766 General Studies
AMP, Inc.
Chi-Chi's
Commonwealth of Pennsylvania Department of Education
Communication Medical Association
David R. Russell, DMD
Giant Food Stores, Inc.
Hershey's Chocolate World
Kinder Care Inc.
Memory Technologies, Inc.
Meridian Bank
Polyclinic Medical Center
Self (Sammalou, Inc.)

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Transfer Institutions

BUSINESS AND MANAGEMENT SERVICES

102 Business Administration
Bloomsburg University
Clarion State University
Dickinson College
Elizabethtown College (4)
Indiana University of Pennsylvania (5)
James Madison University
Kutztown University
Messiah College
Millersville University (3)
Mt. St. Mary's College
North Carolina State University
Penn State University – Harrisburg (54)
Shippensburg University (9)
Towson State University
University Center
University of New Mexico
Wichita State University
York College of Pennsylvania

110 Pre-Teach Business
York College of PA

146 Accounting
Lebanon Valley
Penn State University – Harrisburg

150 Business Studies
Chadwick University
Elizabethtown College
Penn State University – Harrisburg (3)
Penn State University – York

151 Business Management
Elizabethtown College

173 Marketing Management-Retailing
Robert Morris College

192 Executive Secretary
York College of Pennsylvania

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Transfer Institutions

COMMUNICATION AND THE ARTS

206 LA-Mass Communication
Indiana University of Pennsylvania
Kutztown University
Penn State University – Harrisburg (2)
Shippensburg university
Towson State University

209 LA-Communication & Arts
Bowie State University
College Misericordia
Lebanon Valley (3)
Marywood College
Millersburg University (2)
Penn State University – Harrisburg (9)
Salisbury State University
Shippensburg University (2)
University of North Carolina
University of Texas
West Chester University

210 Pre-Teach Communication & Arts
Millersville University (3)
Penn State University – Harrisburg

211 LA-Music
West Chester University

213 LA VA-Art & Design
Dickinson College
Marymount University
Millersville University (2)
Penn State University – Harrisburg

214 LA VA-Photography
Kutztown University

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Transfer Institutions

SNAHPE

307 LA-Physical Science
Millersville University
Penn State University
West Chester University

309 LA-Life Science
Central Penn Business School
Kutztown University
Millersville University
Shippensburg University (2)
Slippery Rock University
Virginia Commonwealth University
York College

310 Pre-Teach Life Science
West Chester University

314 LA-Pre Chiropractic
Pennsylvania College of Straight Chiropractic

327 Practical Nursing/Certificate
HACC
Worwic Tech
York College

349 Dental Hygiene
Lebanon Valley

368 Nursing
Millersburg University
Penn State - Harrisburg (2)
York College (4)

375 Radiologic Technology
Gwynedd Mercy College
Polyclinic School of Ultrasound

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Transfer Institutions

MET

401 Architecture
Boston Architectural Center
New York Institute of Technology

403 Math-Computer Science
Georgia Institute of Technology
Penn State University - Harrisburg
Shippensburg University

412 Engineering
Alfred University
Bucknell University
Drexel University
Joe Kubert Art School
Penn State University - Harrisburg (2)

415 Education-Mathematics
Penn State University - Harrisburg
Shippensburg University

447 Architectural Technology
Boston Architecture Center
Pennsylvania College of Technology

451 Building Construction Technology
Millersville University

458 Electronic Engineering Technology
Penn State University - Harrisburg (5)

468 Technology Studies
Millersville University
Penn State University - Harrisburg
University of North Carolina

470 Mechanical Engineering Technology
Culinary Institute of America
Penn State University - Harrisburg (12)

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Transfer Institutions

SSPSBE

506 Social Services
Penn State University – Harrisburg (3)

509 LA–Social Science
Bloomsburg University (2)
Bucknell University
California State University
Clarion University
College of Notre Dame of MD
East Stroudsburg University
Elizabethtown College
Lebanon Valley College (3)
Millersville University (3)
Penn State University – Harrisburg (8)
Shippensburg University
University of Montana
University of New Mexico
University of Northern Colorado
University of Pittsburgh at Johnstown
Wilson College
York College of Pennsylvania (2)

513 Education, Teaching
Bloomsburg University (2)
East Stroudsburg University
Lebanon Valley
Messiah College
Millersville University (2)
Old Dominion University
Penn State University – Harrisburg (19)
Shippensburg University (3)
West Chester University (3)

514 Education–Social Science
Lock Haven University
Penn State University – Harrisburg
Shippensburg University

515 LA–Psychology
Penn State University – Harrisburg (4)
Shippensburg University

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Transfer Institutions

550 Education-Early Childhood (PS)
Brooklyn College
Portland Community College

570 Legal Assistant
Elizabethtown College
Penn State University – Harrisburg (3)
Shippensburg University

605 Criminal Justice
Eastern Kentucky University
Indiana University of Pennsylvania (2)
Millersville University
Penn State University – Harrisburg (10)
Shippensburg University (2)
University of Baltimore
University of Pittsburgh
York College

663 Fire Science Technology
Millersville University

680 Police Science
Indiana University of Pennsylvania
Shippensburg University
York College of PA

STUDENT SERVICES

765 Liberal Studies
Penn State University

766 General Studies
Collin County Community College
Millersville University
Penn State University – Harrisburg (4)
Penn State University – Reading